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## ABSTRACT

A three-year research project investigated the effects of instructional practices and patterns of language use in bilingual and English-only classrooms on general academic development and the development of English language skills by limited-English-proficient students, especially those skills needed to participate fully in the society's schools. The subjects were native Chinese- and Spanish-speaking students with two to three years of exposure to English, from 17 bilingual program classes. Tests, classroom observation, and audio and video recordings focusing on instructional situations were used to assess oral and written language comprehension and production, subject-area academic achievement, and the instructional practices and patterns of instructional language use. It was found that variables influencing development of English production skills included: interactional opportunities, especially for Hispanic students and those with lower initial English proficiency; quality of the learning environment, especially for Chinese students with low initial English proficiency; and quality of language and teaching, largely for Hispanic students. Variables affecting English comprehension skills included: percent of time in teacher-directed activity; quality of learning environment, for Hispanics at all levels and for Chinese at the intermediate level; quality of instructional language, only for Hispanics; interactional opportunities, for Hispanics; and verbal and extended-response practice, for the Chinese. (MSE)

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FINAL REPORT

FOR

LEARNING ENGLISH THROUGH BILINGUAL INSTRUCTION

Submitted to

The National Institute of Education

by

Lily Wong Fillmore,

Principal Investigator

Paul Ammon,

Co-Principal Investigator

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## EXECUTIVE SUMMARY

Learning English through Bilingual Instruction

Final Report on NIE-400-80-0030

Submitted to the National Institute of Education  
by

Lily Wong Fillmore, Principal Investigator

Paul Ammon, Co-Principal Investigator

Barry McLaughlin, Co-Investigator

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Project description:

"Learning English through Bilingual Instruction" was a three year research project funded under through the Part C Agenda which investigated the effects of instructional practices and patterns of language use in bilingual and English only classrooms on general academic development and on the development of the English language skills by LEP students. This study was designed specifically to determine what instructional strategies are most effective for helping LEP students acquire the English language skills they will need in order to participate fully in the society's schools. The research questions that guided the study were:

1. What instructional practices best foster the acquisition and development of school-related language skills in the second language (i.e., English) of bilingual students?
2. What student language characteristics interact with instructional practices to affect the acquisition of second language skills?

The study was thus concerned with the development of the language skills needed for school participation, and for learning from teachers and textbooks. During the first year of the study, the Research Team determined just what kinds of English language skills were required for academic development by going into classrooms and studying in detail the language used by teachers and students in the conduct of formal instructional activities. We also investigated the linguistic demands of the textbooks that students at the third and fifth grades are expected to handle. The outcome of that year of work was a battery of oral and written language assessment instruments which was later used to assess the language learning outcomes reported in this study. The period of the main investigation which took place in 17 classrooms was one school year. The 17 classes were at the third and fifth grades, and included bilingual and English only classes that served Chinese and

Hispanic background students. The following table shows how the classes were distributed by type, grade level and L1 background of the students:

#### Distribution of the 17 Classes

|       | N    | Bilingual Classes       | English-only Classes    |
|-------|------|-------------------------|-------------------------|
| 3rd   | 13   | 4 Hispanic<br>4 Chinese | 3 Hispanic<br>2 Chinese |
| 5th   | 4    | 1 Hispanic<br>1 Chinese | 1 Hispanic<br>1 Chinese |
| Total | = 17 | =10 Bilingual           | = 7 English-only        |

The subjects of the study were all of the Chinese or Spanish L1 students in the 17 study classes with 2-3 years of exposure to English; there were 157 of them who met our selection criteria.

The purpose of the study then was an investigation of the extent to which features of classroom life such as instructional organization, instructional approach, instructional language use, student characteristics, class composition, and classroom environment affected gains in oral language development (production and comprehension), written language development (reading and writing) and general academic development (reading achievement, language arts, math).

#### Methods:

The methods used in this study included testing (language, reading, writing, etc.); classroom observations which focused on learners and on teachers; audio and video recordings of lessons which focused on the instructional practices employed by teachers and the instructional experiences of learners.

1. Oral language development was assessed by "The Shell/Rock Game", a simulated science lesson. Language produced by the subjects during the "lesson" was assessed for grammaticality, structural complexity and informativeness. Non-verbal and verbal responses to commands and questions based on information "taught" during "the lesson" formed the basis for our assessment of the subjects' comprehension of English.
2. Written language development was assessed by (1) reading

tasks which assessed knowledge of English vocabulary, syntax and textual conventions with an emphasis on text interpretation strategies and comprehension (we were also interested in reading accuracy); and by (2) writing tasks which assessed productive capacity with written English in terms of composition, style, and genre (i.e., expository and narrative).

3. Academic achievement was assessed by the CTBS Test given by all school districts in California in May of each school year.
4. The instructional practices and patterns of instructional language use which made up our independent variables were assessed by rating instruments based on the audio and video recordings that we had collected during the study year.

### Findings:

There were four major clusters of instructional variables that were found to be critically related to language learning.

They can be described as (a list of the instructional features contained in these summary variables is appended):

1. QUALITY OF TEACHING
2. QUALITY OF LEARNING ENVIRONMENT
3. QUALITY OF INSTRUCTIONAL LANGUAGE [as linguistic input]
4. AVAILABILITY OF OPPORTUNITIES TO PRACTICE ENGLISH [in interactions with peers and teachers]

The instructional variables were found to interact in complex ways with two types of learner variables:

1. Initial proficiency in English
2. Ethnic group

An important preliminary finding of the study was this:

L1 usage in bilingual classes: We found a reluctance on the part of teachers in bilingual classes to use the L1's of the LEP students for instruction. A precise measure of the language used by teachers in our bilingual classrooms revealed an average usage

of the students' L1's just 8%, relative to the use of English and teacher silence (the range was 0 to 24%). The growing emphasis on English, even in bilingual classes, stems from the increased pressure on schools and teachers everywhere to provide LEP students with the linguistic means to make a rapid adjustment into English only classes. Our observations indicate, however, that the amount of English used in classrooms serving LEP students is not as crucial a factor as the way it is used.

The major findings of the study were:

1. Different aspects of instructional practices and classroom experiences influence the development of comprehension vs. production skills.
2. The instructional practices that were found to influence language development have differential effects on learners depending on their initial level of proficiency in English.
3. The instructional practices that influence language development work differently for children, depending on their cultural/ethnic background.
4. The role played by the teacher depends on the concentration of LEP students in the class and school, and on the availability of English speakers to interact with.

More specifically, the following relationships were found between our independent variables, and oral language development:

Variables that influence the development of PRODUCTION skills in English:

1. "Interactional opportunities" were related to gains in production for everyone, but--
  - There was a greater effect for Hispanic students than for Chinese students.
  - There was a greater effect for students with low initial proficiency in English, generally. (The Chinese students were an exception--they got more out of interactional opportunities when they were at intermediate levels of proficiency.)
2. "Quality of the learning environment":
  - Significant gains for Chinese students with

low initial levels of English proficiency in classes that were high on this variable.

--Opposite effect for Hispanic students!

3. "Quality of instructional language" and, "Quality of teaching" were both related to gains in production skills for all, but--

--The greatest effects were related to gains for Hispanic students.

--There were relatively minor effects on Chinese students, even at the lowest levels of initial English proficiency.

Variables that influence the development of COMPREHENSION skills in English:

1. Percent time in teacher directed activities (formal lessons, teacher directed discussions, etc.) was related to gains in comprehension for everyone.

2. "Quality of the learning environment":

--Related to gains in comprehension for Hispanic students at all levels of English proficiency.

--Related to gains for Chinese students only when they reach an intermediate level of English proficiency.

3. "Quality of instructional language":

--Related to gains for the Hispanic students, but not the Chinese.

4. "Interactional opportunities":

--Related to gains for the Hispanic students, but not the Chinese. In fact, the Chinese did worse in classes that were high on these variables!

5. Factors that were related to gains in comprehension skills for the Chinese students:

- \* Verbal practice in teacher-directed lessons
- \* Practice giving extended responses in lessons



- \* Opportunities for oral participation in instructional activities
- \* Individual help given by teachers to students

Conclusions that can be drawn from our findings are these:

1. All learners profit from opportunities to interact with peers who speak the target language, but the Hispanic students profit especially. The more opportunities they find to use English with peers, the more they gain in production and comprehension.
2. Chinese learners profit from interactional opportunities with peers only after they have reached intermediate levels of English proficiency.
3. Chinese learners profit more from structured, relatively noise-free learning environments. This factor is related to gains in production and comprehension for them. It is related to gains in comprehension, but not production for Hispanic learners.
4. Quality teacher directed instruction is important for all, but especially for the Hispanic students.
5. Hispanic students are relatively more sensitive to the quality of teaching and to the quality of the instructional language they are exposed to than are Chinese students. Chinese learners are more "immune" to differences in teachers, because they tend to "compensate" for less successful teachers.
6. Chinese students profit most from close interaction with their teachers, and from assisted practice with the language in lessons. They depend more on adults for input than they do from peers. They need a great deal of guided practice especially during the earliest stages of learning English.

Implications:

The findings in this study have important implications for educators who are concerned with the education of LEP students. It is clear that instructional practices and settings work differently for different groups of students. The kinds of settings that favor Chinese students may inhibit learning for Hispanic students. Given



the right conditions and experiences, both groups can flourish educationally, but those conditions and experiences must be tailored to the characteristics of each group. Furthermore, it has been shown that high quality teaching and instructional language use by teachers result in the development of the English language skills needed for academic learning. Apprehensions over the use of the students' L1's in school are unjustified, since the critical factors in classrooms were how teachers used language and instructed their LEP students rather than how much English they used. Our findings suggest that ultimately there are no easy answers in the planning and conduct of programs for LEP students from diverse language and cultural backgrounds: educators must take cultural factors into account in their consideration of various methods of for educating LEP students. They suggest that while factors such as the quality of input and the type of instruction provided by teachers are important, ultimately there are no simple answers to the very large question of what works, or what works best for LEP students. It is clear that educational treatments interact with group learning styles, and that the quest to increase the effectiveness of schooling for all children has got to begin with efforts to discover what works for different groups. Children do not come to school not empty handed; they bring a wealth of social, cultural, intellectual and linguistic knowledge that they have acquired through prior experiences in the home and in their communities--no matter how humble their circumstances. Their parents have given them a language and a perspective on the world. They have presented them with information on a variety of matters that are of importance to the family and group. The ways in which parents and other members of the cultural group have made this information and knowledge available are tied up with the group's communicative and teaching style. Children's early learning and communicative experiences greatly influence their expectations about how things are going to be done in other settings.

## Appendix A THE SUMMARY VARIABLES

The summary variables that were found to have the greatest influence on language development in this study comprised the following instructional features:

### I. QUALITY OF THE LEARNING ENVIRONMENT:

- Low noise level (acoustics, movement, level of noise from outdoor and from surrounding classes, teacher's tone of voice, etc.)
- Low teacher distractability (teacher stays focused in lessons and in interactions with students)
- Learning centered behavior promoted (most of the activities conducted in the classroom are related to curricular goals; teacher promotes task-centered behavior)

### II. QUALITY OF THE INSTRUCTIONAL LANGUAGE THAT SERVES AS INPUT

[N.B. By instructional language as input,

- \* We are talking about English used as a medium of instruction rather than when it is the "content" being taught.
- \* Language learning becomes "input" when it meets certain criteria: it is "comprehensible", i.e. it is used in ways that allow learners to figure out for themselves what the speaker is trying to say; it is structurally "transparent", i.e., it is used in ways that allow the learners to figure out how the utterances are structured; it is language that is being used for real communicative purposes.
- \* Language learning is a collaborative process--both the learners and target language speakers have got special parts to play. The TL speakers have got to modify their speech when speaking to learners in ways that allow them to figure out what they are saying, and to see how the language works. The learners have got to work at figuring out what the speakers are saying, since in that process they figure out how the language works. The process can get short-circuited in at least two ways--the TL speakers don't do what they are supposed to be doing, or the learners don't try to figure out what's going on.

\* The two languages of instruction have to be kept apart.]

The following are aspects of the instructional language variable related to the language used by teachers during lessons:

- Level of structure and vocabulary is appropriate for LEP students, given their current level of proficiency in English
- Adjustments in level of English used are based on student feedback
- Adjustments in level of content being taught are based on student feedback
- Message redundancy by use of paraphrase, repetition, situational anchoring
- Dependence on demonstration, enactment, and realia to get information across to LEP learners
- Contextualization of information--new information is related to given or previously learned information
- Exemplification and simplified explanations as needed
- use of explicit discourse markers such as "first", "next", "before", "that's why..." etc., as aids to comprehension
- Teacher's language is a good model of the target language--grammatically, phonologically, and idiomatically speaking.
- Calling attention to the language in the course of using it
- Using the language in ways that reveal its structure, e.g., by presenting information in paradigm-like sets, etc.
- Explicit discussion of vocabulary and structure

The following are aspects of the instructional language variable having to do with the way other instructional practices provide structural support for the input. These help to increase the students' chances for figuring out or predicting what their teachers are trying to communicate to them during lessons:

- Predictability by time and place what kids are supposed to be doing
- Consistency and clarity of "lesson scripts"

- Clear lesson phases, these phases clearly marked by explicit comments on format
- Lessons follow a daily schedule
- Lessons are consistent across days, and across groups

### III. THE INTERACTIONAL OPPORTUNITY VARIABLE

The following are aspects of the interactional opportunity variable which are related to students' chances to practice the use of English during formal instructional activities:

- Plenty of turns for everyone during lessons (fair and systematic turn-allocation procedures are used)
- Turns call for extended responses
- Teachers provide assistance as needed by students in oral participation ("assisted production" through scaffolding, modelling, expansions, etc.)
- Helpful, useful feedback provided

The following are aspects of the interactional opportunity variable which are related to peer interaction:

- Availability of target language peers to interact with
- Seating and grouping that facilitate interaction between TL speakers and learners
- Freedom to talk and to interact with peers during classtime
- Built-in opportunities to interact with peers on work-- e.g., through peer-tutoring, group assignments, students given collaborative assignments, encouragement for students to consult one another

### IV. THE QUALITY OF TEACHING VARIABLE

- Learning tasks and materials are at appropriate levels for LEP students
- Focus on language in instruction (attention is given to language in lessons that are not on language even)
- Language structure and vocabulary are taught (formally through ESL or during language arts instruction, or informally--e.g., calling students' attention to new forms,

defining words, teaching vocabulary during subject matter instruction, etc.)

- Focus on comprehension (frequent checks on comprehension during lessons and other instructional activities; paraphrases, explanations, exemplification, demonstrations, providing definitions, etc., as needed for clarification; teacher frequently models interpretive strategies for students)
- Varied, effective use of instructional models (not just rote learning and practice, but emphasis on discovery, interpreting, conceptualizing, classifying, too.
- Individual help given frequently
- Teacher gives informative and diagnostic feedback on work and on oral performances
- Students are given many opportunities to work together
- Teacher uses content-rich, elaborated language which is relevant, clear and audible to all
- Teacher focuses on high level skills (comprehension, integration of operations, strategies, etc.) rather than on low level or mechanical skills
- Clarity of instructional goals (what teacher is getting at in lessons is obvious)
- Clarity of expectations (what students should be doing or getting out of the lesson is clear)
- Richness of content (Not just the bare minimum--e.g., focus on literary experience rather than focus on reading for information)

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## CHAPTER 1

### BACKGROUND OF THE STUDY

#### 1.1. Purpose and Description of the Study

The research project, Learning English Through Bilingual Instruction [NIE 400-80-0030], was one of several commissioned by the National Institute of Education and the Part C Coordinating Committee with the goal of determining, through research, how best to meet the educational needs of the limited English proficiency students in the society's schools. This study was one that was designed specifically to determine what instructional strategies are most effective for helping LEP students acquire the English language skills they will need in order to participate fully in the society's schools. Several large issues were examined in the study. These issues, which were raised in the original Request for Proposals, called for an examination of the manner in which instructional practices followed in classes serving LEP students affect their learning of English, and for an investigation of the extent to which learner characteristics such as age and first language background interact with the instructional practices of interest to affect their outcome.

The specific research questions that guided the study were:

- (1) What instructional practices best foster the acquisition and development of school-related language skills in the second language of bilingual students?

- (2) What student language characteristics interact with instructional practices to affect the acquisition of second language skills?

The study was thus concerned with the development of the language skills needed for school participation, and for learning from teachers and textbooks. In conducting the study, we examined the many ways in which teachers provided language learning opportunities for students as they presented subject matter instruction to them each day, and we also examined the ways in which students, as individuals, made use of the language learning opportunities they found in their classrooms. In addition to this primary focus on the learning of English language skills, we were also concerned with establishing just how the various instructional practices we were studying facilitated the educational development of LEP students in the learning of subject matter and basic skills. In other words, we were interested in discovering how these instructional practices influenced the overall academic development of LEP students.

We want to emphasize here that our purpose has been to study the effects of certain instructional practices followed in classes serving LEP students, and not to evaluate the effectiveness of the classes themselves, or of the programs they represented. Educational programs vary enormously in how they are implemented and, in many respects, it is futile to talk about effectiveness in terms of "programs". What is described administratively as an English as a Second Language [ESL] program in one school may be completely different from ESL programs in other schools, and classes within the same program in a given school may differ widely. Similarly, when one looks closely at classes that

are described as "Bilingual", it is easier to find differences among them than it is to find commonalities. By definition, bilingual education in the United States involves

the use of two languages, one of which is English, as mediums of instruction for the same pupil population in a well-organized program which encompasses all or part of the curriculum and includes the study of the history and culture associated with the mother tongue (U.S. Office of Education, 1971).

In reality, "bilingual" programs vary widely in how well they match this description. They may all begin with the same idealization, programmatic goals, and orientation, but just how they get realized depends on a variety of different factors. Classrooms (and, it goes without saying, educational programs) are enormously complex social entities. Teachers and students have conventional roles to play in a classroom, but they operate under the influence of all sorts of individual vicissitudes; what they do, and how they respond to one another depends to a large extent on the interaction of hidden and often unrecognized individual concerns. These concerns can stem from a large number of sources. Children are products of their cultures, and of their early experiences. Their parents, families, friends and community can influence the kind of expectations they have of school and their motivations and attitudes towards education as well, which in turn can affect their functioning in school (Ogbu, 1978; Heath, 1983; Hess & Shipman, 1968; Keeves, 1972; Smith, 1968). The academic performance of these children depends at least in part on their own expectations, motivations and attitudes, but it also depends on their teachers' expectations, and motivations for them, as we have learned

from research (Braun, 1976).

Teachers in educational programs serving LEP students are subject to special pressures that are seldom recognized either by their colleagues or by the general public. While all educational programs are subject to evaluation, few are as closely scrutinized or monitored as are bilingual programs. There is a substantial segment of the American public which believes that the only appropriate educational goal for LEP students is to learn English quickly and thoroughly, and thus, the only justification for bilingual instruction would be that it accelerated the learning of English. Such programs are often evaluated on the basis of whether the students they serve are learning English rapidly, and on little else. Hence, many teachers are reluctant to use anything but English in their teaching, out of a belief that any use of the students' home language in school will delay their learning of English. And so the purpose of bilingual education is often subverted from within, and the children do not receive the benefits that could be theirs, if they were being taught at least some of the time in a language they understood easily. Studies comparing the outcome of such classes with all-English classes would show no difference in outcome, because, in fact, there are no real differences in practice between them to be measured.

Research in second language learning is showing that there are enormous individual differences to be found among children in how fast and well they learn a new language and that the sources of this variation can be found both in the way learners approach and deal with the complex task of learning a new language, and in the way learner

characteristics interact with the language-learning situation. The instructional practices and student characteristics that we have examined in this study are ones that on-going research on individual differences in second language acquisition have identified as major sources of variation among children in how fast and how well they manage the learning of the school language (Wong Fillmore, 1982, 1983). The instructional practices that appear to affect language learning most directly are those that have to do with how classroom lessons are structured and organized, and with how language (especially English) is used for the actual teaching of subject matter. Situational variables stemming from instructional policies with respect to the schooling of limited English speakers can also affect language learning, the most important of these being policies that affect class composition. Some classrooms in which such students find themselves are composed entirely, or almost entirely of non-English or limited- English speaking students while others have both students who are fluent in English and students who speak little or no English. Student characteristics that appear to be important sources of variability in language learning are those that affect the individual's ability to make use of whatever opportunities are available in the classroom to learn the new language, with the occasions on which English is being used in instructional activities by teachers and classmates being instances of such opportunities.

In this report, we present findings that reveal the intricate ways in which instructional, situational and student variables interact to influence the development of English language skills by

LEP students in school.

## 1.2. Overview of This Report

This report is divided into seven chapters. The first, the present chapter, deals with the background and design of the study. The second chapter characterizes the classrooms and subjects in our study. We also present demographic information about the schools and about our students by classroom, and characterize the classes with respect to their initial level of functioning on standardized achievement tests. In the third chapter, we describe the characteristics of the teachers, the instructional practices they followed, and the situational variables, all of which constituted the independent variables examined in this study. The fourth chapter deals with the characterization of the language skills of the children in our study, and presents detailed information about the procedures we used for assessing proficiency in oral language skills. In the fifth chapter we present the major findings of the study. We provide descriptive information, by class and/or by grade and ethnicity group, concerning the initial and final levels of functioning of the children on our oral language measures, and we discuss the analyses of these data against the independent variables examined in the study. The sixth chapter presents the findings of a descriptive substudy that dealt with the NES newcomers in the seventeen classrooms involved in the study. These students posed a special problem for the teachers since they had much greater needs for linguistic and instructional assistance than did the LEP students who had been around English much

longer. How the different schools and teachers dealt with their special needs is discussed in some detail in this chapter. Chapter seven is a concluding chapter in which we discuss the instructional implications of the findings presented in this report, and comment on continuing aspects of this work.

### 1.3. Research Design

We were concerned in this study with two types of factors: the effect of instructional practices on language learning, and the extent to which learner characteristics such as age and ethnicity are likely to interact with such instructional practices to affect their outcome. The design of our study represented an attempt to deal not only with instructional issues but with some major aspects of questions that now appear to be the crucial policy issues concerning the education of NES/LES students.

Policy makers considering the future of bilingual education are bound to ask the following questions:

- (1) Does bilingual education do what it is supposed to do? (i.e., Are NES/LES students enrolled in such programs really getting more out of school linguistically and academically than they might without bilingual education?)
- (2) Is bilingual education as effective a method for helping NES/LES students develop English language skills as are more "straight-forward" methods such as intensive-English instruction, ESL, or



immersion in English?

- (3) Do LES/NES students really need special help learning English, and if so, for how long?

At present, these questions are probably impossible to answer, at least when asked in this form. A basic problem is that it is not at all clear exactly what the criteria of success should be. With regard to the learning of English, it is generally understood that NES/LES children should be enabled to learn enough of the kind of English that is needed for success in the English-speaking world, particularly the world of the school. But what kind of English is that, and how much is enough? We and others have made considerable progress in identifying the English language proficiencies that might be critical and in developing ways to measure them, but a final test of our efforts in this regard requires longitudinal follow-up data on what happens to children who are exited from bilingual programs with varying levels of proficiency in English.

The problem of establishing an appropriate criterion of success arises also with regard to the goal of helping NES/LES children maintain normal academic progress. What is "normal" progress for such children? The use of national, or even local norms is questionable in many instances because we are concerned with children who come from ethnic or socioeconomic groups in which even native English-speaking children score below average. Moreover, it is possible that, at least for some children, the transition into a second language necessarily retards their academic progress, and that it takes them a relatively

long time to get caught up again, even under the best of circumstances one can reasonably expect to find in schools. Again, long-term longitudinal data are needed to explore such a possibility.

Finally, even if absolute criteria of success in bilingual education could be specified, it is highly unlikely that one could give an answer to the questions posed without saying the answers depend upon particular features of bilingual instructional programs and of the students they serve. Obviously the Significant Instructional Features studies were intended precisely to increase our understanding of the ways in which program differences and learner differences affect the outcomes of bilingual instruction. It should be equally obvious that such differences could have important implications for educational policy, as well as for theory.

Given the problems involved in identifying absolute levels of English proficiency and academic achievement as criteria of success in bilingual education, along with the desirability of considering differences among programs and students, it seemed better to adopt a comparative approach to the question of effectiveness. Because we could more easily identify the directions in which students should be moving, we are comparing different types of NES/LES students in different types of instructional programs to see which ones have moved farther or faster in the desired directions. We are using this comparative approach both to look at different types of bilingual instruction relative to each other and also to look at instruction in English only classrooms. Thus the question in this study is not what is the best type of bilingual program but what are the best type of

instructional practices for a given type of NES/LES child.

Essentially our project involved three separate studies. The primary one called for a comparison of the effects on development in English oral and written language abilities

- (1) of various instructional practices in bilingual and all-English classrooms
- (2) serving two ethnicity groups (Chinese and Hispanic)
- (3) within two grade levels (third and fifth).

Thus, we have carried out an intensive study of students with two to three years of exposure to English in 17 classes, 13 at the third grade level, and 4 at the fifth, divided between classrooms labeled bilingual and English-only and between the two ethnicity groups being studied. Figure 1.1 summarizes the research design of this part of our project.

The second study we undertook was an examination of the language learning opportunities and experiences in our target classrooms of a second group of students, whose previous exposure to English ranged from 0 to 1 year at the beginning of the study year. The aim of this study was to describe the differences found among our target classrooms in how the problem of newcomers was handled. Data were collected on how such students were incorporated into the various classrooms, who taught them, how much direct instruction in English they received, how teachers dealt with their special language needs within instructional activities, how much interaction occurred between these

students and the more advanced ones, and how much participation in learning activities was invited from these NES students.

The third study subsumed in this project involves a comparison of the effectiveness of bilingual and all-English programs in enabling NES/LES students to make long-term academic progress. That is, in addition to the intensive study of students in our target classrooms, we also looked at the progress over a three to five year period of an additional number of students selected from among those who spoke little or no English when they entered school. Some of these students were in bilingual programs initially but were exited before the study year; others are still in bilingual classes; and still others have been in all-English classes from the time of their school entry. To do this comparison, we looked at the district language proficiency test data and achievement test scores (CTBS) on these children going back five years. Many of the children in the Spanish bilingual program were tested both with the English and the Spanish versions of the CTBS for several years, thus allowing us to consider their performance on the English version, in the light of their performance when tested in their first language, which is the language in which they have also been receiving a part of their subject matter instruction. Because annual test scores were made available to us, we have been able to examine the academic progress of these students longitudinally. In addition to the test data, we gathered information on these students from their schools and teachers. This additional information has made it possible for us to relate the test data to the students' educational experiences. This report treats the first two aspects of the

study. The third part constitutes some of the continuing work of the project mentioned above.

This report deals primarily with the influence of instructional practices on the development of oral language skills. How they influenced the development of written language skills (reading and writing) in English are discussed in a second volume which is forthcoming. These instructional variables treated in this report were relevant to written language development as well.

#### 1.4. Instructional Features in Bilingual Education

In this research we have tried to examine all those instructional practices that were likely to influence the learning of the language skills needed for school. There were a number of variables differentiating classrooms that were likely to affect language learning. Certain of these variables seemed to us to be especially important.

##### 1.4.1. Language Use

Perhaps the single most important way in which bilingual programs differ instructionally concerns the use of home language and the school language in classroom settings. First of all, there is the question of how the two languages were used for instructional purposes: Which subjects are taught in which language? Are both languages used in a particular class period? We found considerable differences across classes: in some programs, nearly everything was taught in both languages, in others, everything was taught in one

language only--namely, English-- with occasional translations provided in the other language.

The language spoken by teachers constitutes perhaps the most important source of exposure to the target language available to LEP. This was the case whether they were speaking English or the native language of the students. Children acquire the forms and structures associated with mature and formal usage by being exposed to them in the context of use. For these children as for most children, school is the place where the forms of language needed for academic learning and mature communication are modeled and practiced. How well the teacher's language serves as input for language development, however, depends on how it is used. We felt that it was important to look at how teachers in our classrooms used the child's first and second languages. We were interested in the separation vs. non-separation of the two codes, the extent to which each was used for instructional vs. other purposes, the extent to which modifications were made in the use of a language, and the extent of involvement of students in the languages' instructional uses.

Another factor related to language use in the classroom concerns the explicit teaching of the child's second language (the target language). How large a role does instruction in English as a Second Language (ESL) play in the instructional program? Programs vary from having no ESL at all to being almost exclusively devoted to such an approach. What we tried to discover was whether ESL makes a difference, especially in settings where English was also being used as an instructional medium for the teaching of regular school subjects.

Another issue relating to language use in bilingual classrooms has to do with the amount of translation that occurs in the classroom. Some teachers apparently believe that while LEP children should be taught in English, they will not understand anything unless they are able to hear the same material in their first language. These teachers tend to teach in English, but they nearly always provide translational equivalents or explanations of the material in the other language as well. This translation approach can take the form of (a) back-to-back translation, in which the teacher first says something in English and then gives an immediate translational equivalent for it in the other language, or (b) language alternation, in which the other language is used for explanations or expansions of the materials rather than for exact translations. How effective are such approaches? To answer this question, we compared classes in which teachers tended to use language in this manner with classes in which teachers followed the method of teaching lessons directly in English or in the first language while keeping the use of language alternation to a minimum.

#### . 1.4.2. Classroom Organization

How lessons are organized can also affect the extent to which they constitute language development opportunities for children with limited proficiency in English. It was therefore important to look at the extent to which student participation was invited in the classroom, the frequency of language-oriented instructional activities, the clarity of instructional tasks, and the amount of time spent on various types of participatory activities.



In addition, there is the question of grouping. How students are grouped can affect the extent to which they have contact with English speakers, the level of instruction they receive, the overall exposure they have to English, and their need to learn it. We examined in particular the different experiences children had in classes that were organized around teacher-directed group activities versus classes that were organized around individualized or self-directed learning activities. Previous research led us to believe that learners in open-type classrooms have to play a much greater role in getting needed exposure to the target language than do those in teacher-directed classes (Wong Fillmore, 1982). In teacher-directed classrooms teachers tend to talk to students in groups more frequently than is the case in open classrooms. As a result, every student in such classrooms receive a certain amount of exposure to the target language, whether or not they are inclined to interact with speakers of the language. Situations in which teachers interact with students, even if it is in groups, can be considered "free" exposure to the target language, in a sense, since students do not have to play much of a role in getting it. In open classrooms, interaction between the teacher and student tends to be one-on-one. Some of this interaction is initiated by the teacher, and so everyone is likely to get a certain amount of exposure to English, but there is a limit on how much such interaction any individual can get. The student plays a major role in getting as much contact with speakers of the language. But not all students find it easy to play their part in such interactions. It takes a lot of social skill to initiate and sustain the kind of interactions which can provide the input needed for language learning.

Some children are more skilled at getting this sort of input (high input generators), while others are not. Hence, some children tend to get more contact than others with teachers and other students who can help them learn the target language.

The importance of classroom organization is particularly obvious in cases where there is a marked imbalance between language learners and students who are proficient speakers of English. In situations where the class is made up of almost entirely limited proficiency speakers of English, the teacher and the aide (if there is one) are likely to be the only sources of second language input. While one-on-one interaction is ideal for language learning purposes, there is only so much of it to go around. Teachers may get around to every student a few times each day, but anyone who needs or wants more practice using the language will have to seek out teachers or classmates who know it, and interact with them. How students manage to learn the target language in such classrooms was another of the questions we raised in examining our data.

#### 1.5. Situational Variables

Another set of variables that we examined was related to situational factors. What type of program was the school engaged in? How supportive were the school and the teachers of the program? How did this affect the practices we are interested in? Did the teachers adhere to the instructional model that the school was committed to?

Another important situational variable had to do with the concentration of NES/LES students in schools and classrooms. This concentration affects the frequency and number of contacts LEP students can have with peer-aged speakers of the target language, which in turn are likely to affect their motivation for speaking and learning English. It is also likely to affect the amount of exposure and practice they get in the target language. The number of NES students presents very special problems to teachers, since such students increase the range of language proficiency levels that have to be dealt with in the class. One of the difficulties connected with teaching limited and non-English speakers is that teachers have to adjust the language they use for instructional purposes in order that it might be appropriately tailored to the special needs of the students. By the third or fourth grade, the need for such adjustments is rather small, since even those students who began school (say in kindergarten or the first grade) with no English are able to understand the language quite well, although they may not speak it fluently. The presence of newcomers to the language (NES students), however, changes the situation. The adjustments that have to be made in order for these students to understand are major -- adjustments that are likely to slow down the instructional process for the students who no longer need that much help. Several of the questions that we posed in examining our data were aimed at assessing the efficacy of instructional practices which deal with the problem of having students at a variety of language proficiency levels within the same class.

## 1.6. Learner Variables

### 1.6.1. Age at Introduction to English

In addition to instructional factors and situational variables, we identified a number of learner variables that were likely to interact with instructional practices. The first of these the student's age at the time of introduction to English. The way we attempted to examine the effects of age at introduction to the second language was to include children who were introduced to English at age 5 or 6 (the usual age for entering school) and others who first came into contact with English at the age of 8 or 9 (say, by entering school around the second or third grade). Since we could not study these two groups of children longitudinally up to the same grade level, we focused our attention on children who had had about two or three years of English. Children who began school at about age 5 or 6 would have been in the third grade after two or three years. Those who began at age 8 or 9 would have been in the fifth grade after the same length of time. Thus we studied children in classes at the third and fifth grade levels. However, very few self-contained bilingual classrooms were available for study at grade 5, so the fifth grade data were from just one bilingual and one all-English classroom within each ethnic group. Consequently, these data were used primarily for qualitative analyses that checked on the extent to which results observed in grade 3 are paralleled in grade 5, with subjects whose introduction to English occurred later. In addition, because some of our fifth grade subjects had more or less exposure to English than 2-3 years, we treated them as case-study comparisons of fifth graders who

differed with respect to their ages at the time of introduction to English. A second learner variable we examined in analyzing our data was that of initial proficiency level in English. Although the subjects in the study had had about the same amount of exposure to English at the beginning of the school year, they differed widely in how proficient they were in it. Some were almost as proficient as native speakers in their use and understanding of the language. Others were barely able to make themselves understood, and were clearly had a long way to go before they could be said to be proficient speakers of English. This variable was considered only after we had begun to analyze the data; it turned out to be a critical factor in making sense of the pattern of findings that emerged in this study.

#### 1.6.2. Language Group Membership

The final learner variable was first language and cultural background. The way we approached studying this variable was to select two groups for study that we believed (from previous research) would approach language learning somewhat differently. We therefore compared the effects of instructional practices on the learning of English by Cantonese-speaking Chinese children and by Spanish-speaking children. Previous research (Wong Fillmore, 1983) suggests that these two groups differ with respect to how much they turn to adults vs. peer-age speakers for assistance in language learning. There were practical reasons for selecting these groups as well. We had been doing research with children from these backgrounds and had familiarity with these two groups. Furthermore, we had among the members of our research team the linguistic skills needed to study these two

groups.

There are several ways in which the language background of children may affect the learning of a second language. The first has to do with first language interference, a topic which has been studied extensively in adult second language learning. Does the extent to which the learner's first language differ from the new language in form, structure, and use affect the learning of that new language? Our subjects included native Cantonese-speaking and Spanish-speaking children. While there is some evidence of first language interference to be found in the speech of both groups, the amount and seriousness of this interference seems to be about the same for both, so the learner's first language does not appear, at least on the grounds of interference, to warrant a cross-linguistic comparison of these two groups. Nevertheless, the children's first language experience may influence the development of a second language, particularly when it comes to the development of those aspects of language involved in literacy acquisition.

#### 1.6.3. Individual Differences

Research on individual differences in second language acquisition (Wong Fillmore, 1982) has shown that a number of learner characteristics can interact with instructional situation variables to affect the learning outcomes in important ways. One such characteristic is the first language background of the child, which was discussed in terms of ways in which the learner's first language itself might affect the learning of a second language.

While there do not appear to be differences relating to linguistic structure per se, there do appear to be relevant differences between the two groups in sociolinguistic variables, in patterns of language use in which the two linguistic communities differ, and in social and learning behavior. For example, Wong Fillmore and Ervin-Tripp (Wong Fillmore, 1982) have observed rather striking differences among the LEP children they were studying as to whether they were inclined to orient their activities in the classroom around adults or children. While there were differences in degree to be found among them, the Chinese children tended generally to be more concerned with the expectations and opinions of the adults in their world than they were with those of their classmates. They appeared to look more consistently to their teachers and to other adults in the classroom for guidance and support than they did to one another. By contrast, the Mexican-American children in the Wong Fillmore and Ervin-Tripp study appeared far more attuned to their peers socially than they were to adults. While they obviously liked being around their teachers, they seemed to turn more to peers for ideas and direction than to their teachers.

In addition to these broad differences between groups, children in both ethnic groups differed with respect to the extent to which they were outgoing and sociable in interacting with their peers. Children who were more outgoing and sociable obviously tended to spend a lot more time talking to classmates than did children who were more quiet and shy. How do these differences affect language learning? This would seem to depend on whether the group with which the child



interacts uses the target language or not. If the sociable child is interacting with native English speakers, one would predict that language learning would be facilitated, because the child would be constantly exposed to good language models. If the outgoing child is interacting with non-native speakers, one would predict that language learning would not be helped, because there would be little incentive or opportunity to learn English. In situations where these sociable children might use English in their interactions with other limited English speakers, they would be practicing an imperfect learner's version of the language, features of which are likely to become permanent parts of their language system.

Social differences of this nature have been the focus of a series of child observations that were also conducted in the classroom in connection with this study. Our aim in this regard has been to establish just how individual and group differences of a social nature interact with instructional variables related to the instructional programs to which our subjects have been exposed in school.

Research in second language learning has also indicated that learning style differences in children may also influence their speed and success in the learning of a new language. In this study, we have adapted three measures of cognitive style to study the possible effects of learning style differences in our subjects. The measures we have selected for use in this study focus on the following learner characteristics: (1) ideational fluency, (2) ability to use context, and (3) propensity to take risks. Two of the the three characteristics (ideational fluency and the ability to use contextual



information) have previously been examined in Wong Fillmore and Ervin-Tripp's study of individual differences on second language learning, and the indications are that they are particularly important. In both studies, ideational fluency was measured by a task that requires children to think of, for example, a variety of uses for everyday objects. In the present study, use of context was measured by a modified version of Werner and Kaplan's Words in Context task, where the child guesses the meaning of a made-up word on the basis of hearing it presented in five different sentence contexts. Three items were presented to each child in English and three items were presented in the child's first language (Cantonese or Spanish). The risk-taking task, adapted from one developed by Block & Block (1981) involves the measurement of the time and number of trials a child takes before guessing the color of marbles he thinks are more numerous in a container whose contents are hidden from view. He is allowed to look at as many trial samples of one marble as he wishes (returning each to the container), until he feels he can make up his mind. The certainty with which he makes his final guess is also measured. The instructions and sample items for all three measures were translated into Spanish and Cantonese so that our subjects would be clear about the nature of the tasks, irrespective of their current level of knowledge of English. Students were themselves allowed to choose the language in which this information was presented to them.

Finally, there was the question of family background. What effect do the educational level of the parents, the amount of exposure to English that the child has in the home and neighborhood, and fam-

ily attitudes toward schooling and the use of the new language have on the child's continuing development in the target language? To determine the extent to which family differences influence language learning and school performance, we conducted extensive interviews with the families of our subjects.

### 1.7. Language Skills Needed for School

One of the critical issues in our research concerned the nature of the language skills that students need to have in order to participate in instructional activities conducted in their classrooms. We believe that linguistic competence in the literate person is made up of different kinds and layers of skills. It is too often assumed that language ability is a single, all-purpose skill, and that students who know a language well enough to function reasonably well in everyday social situations also know it well enough to function competently in the classroom.

As Cummins (1979) and other theorists have pointed out, the language skills needed for complex cognitive activities such as those involved in literacy, are importantly different from those skills that enable individuals to participate in informal social interaction. The kind of language used in ordinary social discourse has been described as "situated" or "context-embedded." The situation in which the speech is produced and in which the participants are themselves engaged provides a variety of cues to support the interpretation of the linguistic part of the activity. This contrasts sharply with the

language of textbooks or the instructional language that goes along with the use of textbook material. Such language has been described as "decontextualized"; it is language that is not situated in a social context or a definite setting, but that can only be understood with reference to linguistic conventions and textual information. In point of fact, it is not decontextualized--since any text provides a context for its own interpretation. The kinds of cues that texts provide for interpretation are linguistic and textual ones, however; they tell the reader what aspects of his linguistic, social, real world, cultural, or topical knowledge must be applied to the reading of the text in order to interpret it.

The point is that the "decontextualized" language that typifies much classroom activity needs to be evaluated in a different manner from the way in which one assesses more colloquial language skills. Few of the language assessment instruments that are available commercially are sensitive to this distinction, we believe. For this reason we devised our own language measurement procedures that focused specifically on assessing the extent to which students were able to deal with the kind of language used by teachers in formal instructional activities and by textbook writers in the preparation of instructional materials. Both our reading and writing measures, as well as our measures for assessing oral language skills, were devised to give us an indication of how well the individual child is acquiring target language skills of the type that are needed for school. These measures are described in greater detail in the fourth chapter of this report.

## CHAPTER 2

### GENERAL CHARACTERISTICS OF STUDY SITES

#### 2.1. The Social and Political Context of the Study

The study was conducted entirely in California, all of the research sites being in the greater San Francisco Bay Area, and within 2 hours drive of the Berkeley campus of the University of California. The region is unique in its linguistic and ethnic diversity, with school districts in its urban centers reporting as many as 50 to 70 different ethno-linguistic subgroups within their student populations. At the same time, this area is not unrepresentative of other places with large concentrations of language different groups.

The various subgroups in the area tend to live in specific neighborhoods or sections of town in their own communities, and whether by choice or because of circumstances such as the availability of affordable housing, these neighborhoods are pretty much segregated ones, with at most, one or two other ethnic minority group living in close proximity. Because of such residential patterns, one finds children of these groups concentrated in particular schools in each city, rather than integrated throughout that district's schools.

Spanish-speakers comprise the largest linguistic subgroup in the region (1980 Census figures), as elsewhere in the country. In California they comprise 19% of the total population, a proportion that seems to be growing. They live throughout the region in both its

urban and rural communities. Asians make up the second largest subgroup, with Chinese the largest in number among them. They are smaller in overall numbers than the Hispanic group, but because they are largely concentrated in the two large urban centers in the area, their communities are in many respects as prominent as are the Hispanic sectors. Spanish-speakers in the area originate largely from Mexico, although those residing in San Francisco are from all parts of Latin America. The Chinese are largely from the Canton region of China, with a good many of them having come to the United States in recent years via a long stay in Hong Kong. Among the more recent arrived members of this group are many who came as refugees from Southeast Asia.

The schools in the Bay Area are familiar with the special educational needs of ethnically and linguistically different students. Indeed, they have been centrally involved in many of the most important recent developments affecting educational policies that concern language minority students in this country. The Supreme Court decision in the Lau v. Nichols case establishing the right of LEP students to special instructional assistance with the language of school involved the San Francisco School District. As a result, the basis for the so-called "Lau Remedies" which have served as guidelines to be followed throughout the country was the agreement which was struck between the U.S. Office of Civil Rights and the District as to what would be appropriate remedies in the case. These remedies, as we see, called for bilingual instruction wherever LEP students attend school. The districts in this region have been in the forefront in the

development of bilingual education programs, with the first ones established immediately after the passage of federal legislation providing funds for such programs in 1968. Educators in this area have also been involved in getting state legislation passed which provides for the most comprehensive bilingual education programs in the country (the Chacon-Moscone Bilingual Education Act, A.B. 1329, 1976.)

The San Francisco Unified School District has developed educational centers which serve newly arrived LEP students, and these have served as models for other districts in the state and in other parts of the country. At these educational centers, newcomers are given intensive instruction in English along with instructional support in their native languages for a year or two to facilitate their adjustment to the American classroom. Then these students are placed in bilingual classes where they are available in the students' native languages, and where they are not available (not surprising since there are students from some 70 different linguistic groups represented in the District's schools), they are placed in schools where they receive additional instruction for a time in English as a second language.

There have been large bilingual programs for the two target subject groups involved in this study in the two large urban areas since 1969, and for Spanish speakers in the rural areas for the past 5 or 6 years since the passage of state legislation mandating bilingual education for LEP students. But while the schools in the region have long been involved in dealing with the educational needs of their linguistically and culturally diverse student populations, and while

they have been progressive in developing instructional programs for these students, they have also been particularly sensitive to political and economic changes which have, in the past several years affected public support for programs designed to address the special needs of these groups. In California as throughout the country, the schools have been subjected to an intense public examination of educational policies relating to LEP students. There has been in the past several years, an increased concern expressed in the media and in various public forums over the aims of educational programs serving these students. The concern is that instructional programs that make use of languages other than English may be promoting language divisions in the society, and may, in fact, be instrumental in allowing LEP students to avoid learning English and to remain linguistically unassimilated. As a result, there has been an increased pressure on the schools to demonstrate that whatever is being done programmatically for LEP students, they will result in their learning enough English to make an expeditious and successful transitional into the all-English programs. In the past several years, then, the emphasis has shifted sometimes subtly, and at other times not so subtly, from providing bilingual instruction for LEP students in many of the area's schools to providing them with the linguistic means to make a rapid transition into all English classes.

In the four districts where we conducted the study, the effects of the pressures noted above were to be seen everywhere, if one was familiar enough with the situation to evaluate it. We found a growing reluctance on the part of all but the most committed teachers in bil-



ingual classes to use the native language of the students for instructional purposes. In selecting sites, we experienced considerable difficulty finding bilingual classes meeting our selection requirements, and in which teachers were doing much subject matter instruction in the students' Ll's. This is not to say that the students' first languages were not used at all in the classrooms; they were, but not as much as we had hoped to find for instructional purposes. Often, it was the case that the teachers in such classes used English exclusively for instruction, and the students' native language only in informal interactions. Another common pattern was that if a language other than English was used at all, it was used by the Teacher's Aide in tutoring only the students who were the most limited in English proficiency.

Entry-exit practices also reflect the changing situations in the schools. A key consideration in our site selection was that there be, in each of our research classrooms, a sufficiently large set of students who had been in the program continuously for 2 to 3 years. But the entry and exit practices were such that as students learned enough English to survive in all-English classrooms, they were mainstreamed, these being replaced by children who, because they were recently arrived in the schools, were more limited in their English skills than their classmates. Hence, many of the classrooms that might have been suitable choices as study sites could not be selected since they did not have sufficiently large numbers of students in them who met our criteria as subjects. We could not have gotten a very representative picture of the effects of the instructional practices followed in such



classes, since the children who are the most successful in learning the language of school are no longer in those classes, and those who remain have not been there long enough to reveal the effects of the practices by which they are being taught.

The emphasis on English rather than on native language instructional support in bilingual programs has meant that in many places, the native language is used mainly to facilitate the delivery of English instruction, and not, as we might hope, for the direct instruction of subject matter. As a consequence, we have found that it was sometimes difficult to distinguish bilingual classes from all-English ones in many of the schools we visited during the site selection period. This, despite the fact that by state law, such programs are required to offer at least some subject matter instruction in the native languages of the LEP students. While the schools generally comply with the letter of the law in having classes which are designated as "bilingual", in practice, such classes vary as to how bilingual they really are, and in what form the native language instruction takes. Much it seems, depends on how much support there is for bilingual education in the larger community. The state law requires that teachers in such classes be bilingual, bicultural and certified to teach in bilingual programs, but in practice, many bilingual classes are taught by teachers who meet none of these requirements. A waiver provision in the law permits teachers who do not meet qualifications for service as bilingual teachers to serve in bilingual classrooms for as long as two years, provided they make some efforts to get certification. However, few of the teachers who lack the language

skills needed for teaching in bilingual programs are likely to acquire them at the level needed to teach in school in two years. One finds in some bilingual classes, teachers who do not know the first language of the students well enough to offer them any instructional support in that language, no matter how willing they are to do so. In some cases, teachers know the language, but do not use it for instructional purposes because they do not believe it is a good idea. Indeed, some of teachers of bilingual classes we visited, and whom we interviewed in our site selection period admitted that they were opposed to bilingual instruction, and felt it was a mistake to encourage the use of the students' language in school. These teachers reported that they taught only in English, and our observations confirmed this. One might wonder whether these classes should be called bilingual at all, since they were only by virtue of the students' language skills. Such classes are bilingual in name only.

The public scrutiny on how the schools are dealing with the instructional needs of LEP students have placed considerable pressure on even the most committed bilingual teachers, and this pressure has affected the bilingual effort considerably over the several years that we have been engaged in this study. In all but two of our bilingual sites, the only subject that was taught in the students' L1's has been L1 reading. The emphasis on English can be seen most clearly in the fact that in most districts in the state of California, the academic progress of the students in bilingual programs as in all other programs is assessed in English. Hence, teachers feel they must stress subject matter instruction in English, and even when LEP students in

these programs do not know English well enough to understand or to use that language in the classroom, they are being instructed primarily in that language. In our selection of sites, then, we have had to try to find classes which, if they are not ideal examples of the programs we are interested in, are representative of classes in which students of the two target subject groups find themselves in this area.

## 2.2. The Districts

Four school districts in the San Francisco Bay Area participated in the study. Two are large urban districts, the other two are small rural or semi-rural districts. The Cantonese study sites were drawn exclusively from the two urban districts, since the Chinese in the area are concentrated in the two communities covered by these districts. The Hispanic sites were drawn from one of the two urban districts, and from the two rural ones. What these districts were like, the number of schools involved in the study from each district, the target group studied at each of the sites, and the concentration of that target group district-wide are as follows:

| DISTRICTS  | TYPE  | TARGET GROUP | % GRP/<br>DIST | SCHOOLS        |
|------------|-------|--------------|----------------|----------------|
| District A | rural | Hispanic     | 12%            | School #1      |
| District B | rural | Hispanic     | 40%            | School #2      |
| District C | urban | Hispanic     | 11%            | Schools #3,4,5 |
|            |       | Chinese      | 12%            | Schools #5,6   |
| District D | urban | Chinese      | 35%            | Schools #7,8   |
|            |       | (Asian)      |                |                |

The rural sites were included in order to make the Hispanic classes more representative of the schools serving Spanish-speaking students

in California. As noted above, the Hispanic population in California as in other states reside in both urban and rural areas.

The four districts differ considerably in their makeup, as might be expected. The two urban districts are very large (one has 72 elementary schools, the other has 62); the two rural districts are much smaller (District A has 6 elementary schools, District B has 15). They differ, too, in the ethnic diversity of the student population they serve. The two urban districts have students from a great variety of ethnic and linguistic backgrounds. District supplied language census figures indicate from 50 to 70 more-or-less different languages spoken in the homes of the students, according to parental report. (Such figures are difficult to interpret since the Districts simply count up the different language designations reported by parents. Parent reports are notoriously unreliable, however, since there is considerable variation in what people call particular varieties of language, and in how they spell the Anglicized names of these varieties. Hence, one sometimes finds in school district supplied lists of "home languages" as reported by parents, more than one reference to the same language (e.g., Taishan, Hoisan, Sze-Yip, Cantonese, and Chinese may designate the same variety--namely, the dialect of Chinese spoken in the Taishan district of the Canton province in China). At other times, the same name can be used to refer to a variety of quite distinct languages or dialects (e.g., The general label "Chinese" is often used to refer to any of the various languages or dialects spoken by Chinese people although there are substantial differences among the languages spoken. Varieties such as

Taishanese, Cantonese, Mandarin, and Shanghainese are not mutually intelligible, but are nevertheless often counted as one language.)

The two smaller districts have much less linguistic and cultural diversity represented among the student population. The largest minority group in these two districts is the Hispanic; note that in District B, 40% of the students in the district's schools are Hispanic.

The large minority group population in these districts have generally kept their enrollments up, despite the trend in the area for a decline in school enrollment. In the two urban districts, the steady enrollment has been due in large part to the continual influx of new immigrants and refugees. In the past few years, the proportion of majority group students has declined in both districts, due to families moving out to the surrounding suburban communities, and because of a general decline in family size among this group. In adjacent districts, a number of schools have had to be closed each year because of declining enrollments, but in these two districts, there has been no shortage of students.

Both of the urban districts have had a dramatic increase in the number of Asian students enrolled in their schools recently, due in large part to the influx of Southeast Asian refugees into the area in the last few years. In District D, as shown above, some 35% of the school population is now Asian/Pacific, with Chinese students being the largest subgroup. The district also has many Hispanic students, many of whom are limited in English language skills.

District C likewise has sizable enrollments of Asian and Hispanic students. In the past, the Hispanic group was larger than the Asian in this district, but the Asians now outnumber the Hispanic slightly (12% Asian, 11% Hispanic). There are some differences, however, in how the two groups are distributed in the district. The Hispanic students are found in fairly sizable number in 8 of the district's elementary schools. The Asian students are concentrated at 3 elementary schools. This of course reflects the residential patterns of the two groups, since most of the schools in this district serve the students who live in the neighborhoods in which they are located.

As can be gathered from this discussion, Hispanic students are well represented in all four districts, but there are differences to be found among them across the districts. The most rural of the two districts (A and B) described here as "rural districts", is District B. The community it serves consists of a small town with a population of about 25,000, and the surrounding rural area which is part of a major agricultural region. In contrast, the community served by District A, while also a small town (population, 40,000) in the same region, is a popular seaside resort town in which a campus of the University of California is located. As one might expect, the Hispanic population in these two communities are somewhat different. In the community served by District B, many of the Hispanic families are recent arrivals from Mexico. A sizable proportion of the Hispanic families are engaged in agricultural work--the most recently arrived members of this group are involved in field work, the more settled ones are likely to have jobs in the canneries and in other types of

food-processing plants located in the area. The Hispanic families in the community served by District A are slightly more established, although there are families who are fairly recent arrivals in this community too. While many of the members of this community are still engaged in agricultural work, most are employed in canneries and in other types of farm work rather than in actual field work.

The Hispanic families residing in the community served by District C are similar to those found in the two rural communities in that they came originally from Mexico, and many of them have been involved in farm work. These families are generally more established, however, although there is a sizable number who have only recently come to the area from Mexico. The recent arrivals however, generally have relatives among the long-time residents of this community. Few of these families are engaged in farm work since there are precious few farms in the immediate area. Instead, many of the families are engaged in blue collar jobs or service-type jobs in the community.

The Hispanic families residing in the community served by District D are very different from those in the other three communities. The families in this community are from all parts of Latin America and the Caribbean region rather than from Mexico, although there are families that originate from Mexico as well. There are, among these families, many refugees and immigrants from Latin American countries that have been subjected to political and economic upheavals in recent years; there are Cubans, Chileans, Guatemalans, Panamanians, Salvadorians, Columbians, and so forth. Many of these families were members of the middle-class in their home countries; they are educated



and many of them are professionals. Hence there is much greater cultural, social and educational diversity to be found among them than among the Mexican families found in the other three communities. No Hispanic classes were drawn from this district, because of these differences.

The four districts each had a strong commitment to bilingual education and each had had bilingual programs for at least five years. Because of the way the study was designed, we had to find schools in which there were sufficiently large numbers of students in each of the target classrooms who had begun school with little or no English, two to three years earlier, and who had been in the same kind of program (all-English or bilingual) continuously since they first entered school. That meant that the districts we selected had to have entry and exit policies that permitted children to remain in whatever type of program they were attending for at least 3 to 4 years. As pointed out in the previous section, some districts limit the participation of LEP students in bilingual or ESL type programs to a short period of time, the main programmatic goal being to mainstream these students as soon as they learn enough English to survive in all-English classes. Programs in those districts would not have allowed us to study the long term effects of the instructional practices we are examining in this study. Districts differ in their entry-exit criteria since by state law (AB 507, Chapter 1339, Statute of 1980), such criteria are set by the districts following guidelines established by the California State Board of Education.



The bilingual programs in the participating districts are largely transitional in the final analysis. None of the children in the study's bilingual classes are likely to remain in bilingual programs through high school. But they vary in just how long they can expect to stay in such programs, this depending in part on the district's entry-exit policies, and in part on the availability of space at each level of the program. Because of the large number of students needing linguistic help in school, especially in the two urban districts, and because of ever-shrinking resources, few of the children now receiving bilingual instructional assistance can expect to continue getting help for long. Most of them will be transitioned out after the 6th grade, if not before then.

### 2.3. The Schools

The 17 classes that represent the 16 research sites were located in 8 elementary schools drawn from the four participating districts. During the site selection process that was carried out in the winter and spring preceding the study year, some 60 classes in 16 schools were visited. The study classes were selected from the many we considered, because they, better than those that were not chosen, fit our selection criteria, and because the teachers and administrators were willing to participate in the research.

The schools from which the study classes were selected were all "Title I" schools, a fair indication of the socio-economic level of a substantial segment of the families served by each school. Only one of these schools had a discernible non-minority group enrollment, the

school here designated as School #1, which is located in the semi-rural community served by "District A". The other schools had near total "minority group" enrollments.

Each of the 8 schools will be characterized here, to provide the reader with a picture of the situational differences that existed across the research sites.

School #1: This is the school mentioned above as being the only one in the study sample with a discernible majority group enrollment. These majority group students were largely from middle class families, and lived in the neighborhood in which the school was located. The neighborhood is an older one in this seaside community, which is a popular California resort town. The school has a K-6 bilingual program to serve the the limited English speakers among its Hispanic students who comprise about 35% of its enrollment. Not all of the Hispanic students who were in need of the program were enrolled in it however, since there were more students who were eligible for bilingual services than there was space in the program. At the same time, not all of the students in the bilingual classes were Hispanic since it is against the district's policies to have segregated classes. Hence, in each of the bilingual classes in this school, there were English monolingual majority group students who could serve as a potential source of English input for the Hispanic students who were limited in English skills, and there were in some of the all-English classes in the school, Hispanic children who were much like the Hispanic students in the bilingual classes. But while the two groups were integrated in the bilingual classes as they were in the

rest of the school's classes, they did not actually interact much, as our observations seemed to show. The two groups coexisted quite peacefully, but the cultural and linguistic differences between these groups seemed to keep them apart.

The "Anglo" students in the bilingual classes were there because their parents had voluntarily placed them in the program, an indication that at least their parents were interested in having them integrated with the Hispanic students, and in having them learn Spanish. Indeed, these students received about an hour of instruction in Spanish each day, this consisting largely of explicit language instruction, involving pattern practice and vocabulary drills. But while these students were eager enough participants in the language lessons, and in the other instructional activities that were carried out during the school day, they were pretty much segregated from the Hispanic students not only socially, which was by choice, but instructionally as well. In the bilingual fifth grade class which was one of the three classes included in the study sample, the Anglo students were grouped separately for instruction for much of the day. While they were receiving Spanish as a second language instruction, the Hispanic students were receiving language arts instruction in English, this instruction being especially geared to the needs of non-native speakers of English. Of necessity, the Hispanic students received their English reading instruction apart from the Anglo students since they were, due in part to language differences, reading at lower levels generally than the Anglo students.

The self-imposed social segregation was in no way unfriendly, it seemed to us, but at the same time it was quite apparent. Students of each group tended to socialize only with members of their own group, both in the brief free encounters that took place within the classroom, and during the recess and lunchbreaks. The two groups dressed, in fact, in distinctly different modes-- not a small indicator of the social differences between them. By the fifth grade, dress becomes an important mark of social group identification, with each group having a distinctive kind of "in-group uniform". The uniform for the Anglo girls, was a preteen version of California surfer-preppy garb: For the girls, sweat bands holding "Farrah- Fawcett-styled" hair in place, alligator-emblazoned polo shirts, designer-jeans, and knit leg-warmers (even on the warmest days) over the trouser legs. For the boys, the favored costume included striped soccer shirts, jeans, down-vests, and name-brand running shoes. The look for the Hispanic students was in sharp contrast to that of the Anglo students: Long flowing hair for the girls, longish but not long hair with modified duck-tails for the boys. The uniform for girls and boys alike was a black uni-sex poplin jacket, white T-shirt, and black jeans. The girls, however, favored black cloth Chinese Kung-Fu-type slippers, while the boys favored carefully shined ankle-height boots with slightly raised heels.

During class breaks and lunch period, the students generally headed off in different directions to congregate in their favored places on the school grounds. Thus, while there were English speaking peers present in the school and in the classrooms attended by the Hispanic classrooms, there was, from our observation, little direct

help in learning English that resulted from these students being in the same classes.

There were two other classes involved in the study that were drawn from this school. These were two third grade classes which comprised one of our all-English study classes. As mentioned above there were Hispanic children at each grade level who would have been in a bilingual class had there been one at the school. These children were distributed among the several third grade all-English classes in the school. We selected the two with the largest number of students meeting our subject selection criteria to be included in the study as an all-English study site.

In these classes, the majority group students outnumbered the Hispanic students, as the demographic information provided below will show. Unlike the fifth grade students who were near-adolescents, these third graders did not seem to segregate themselves as completely on the social level, and they were far better integrated instructionally as well. In one of the classes, the instructional program was largely organized around individualized materials, which the students worked on at their tables by individual assignment. Since these tables were generally integrated, the children found themselves sitting and working together much of the day despite fact that they were working at different levels, and sometimes on quite different materials. For brief periods each day, the Hispanic children were separated off for directed instruction provided by the teacher-aide who tutored them in reading or in language arts. In this class as in the other third grade class in this school, the Hispanic children and Anglo

children sometimes played together in the school yard during class breaks, although there was a general inclination for them to stay with their own groups.

School #2: This school was in the other rural district, the one designated above as "District B". There were differences between the two schools, the main one being that while located in the same general area, the community that it served was clearly a rural one. The great majority of the children in this school were Hispanic-- generally from Mexico, and mostly from families that have not been in this country for long. The families served by this school, Hispanic and Anglo alike are largely engaged in farm work, and indeed the school was located several miles from town, right in the midst of fields and orchards. There was a large and thriving bilingual education program at this school, and there was no shortage of children in need of such instructional assistance as could be provided by the program. In fact, the school was very much a bilingual school, although not every class was a part of the program. Because the Hispanic families served by this school were relatively recent immigrants, and because they were engaged in farm work, there was considerable transience among the students enrolled in this school, although it was not as great as we have found among the Hispanic students in one of our urban schools. The teachers at this school reported that the Christmas break sometimes stretched well into the spring for children from the more recently arrived families, who apparently with strong familial ties in Mexico. During the Christmas break, which is an off-season for farm work in the area, the families travel back to Mexico for prolonged

visits which last until work is available again in the fields.

At this school, we had one study class only, a third grade bilingual class. There were Anglo children in the class off and on throughout the school day. The instructional program was team-taught, however, with children moving between the various classrooms involved in the program for instruction in different subject areas. The Hispanic children, because they were receiving a part of their subject matter instruction in Spanish, tended to be segregated for instructional purposes for much of the day. The Hispanic children sometimes interacted socially with the few Anglos in their classes, but it was infrequent, owing partly to the language differences that precluded easy interaction, and partly to the way their instructional programs were structured. At any rate, the children generally stayed within their own groups when they were out on the playground during recesses and lunchbreaks.

Schools #3 & #4: These were two of the schools in the urban district which has been here designated as "District C". These two schools are located in different parts of town where Hispanic and Black neighborhoods adjoin and become one. The students served by the two schools, until recently, have come from these two groups almost exclusively. In the past several years, Indo-Chinese refugee families have moved into both areas, and hence there are now some Asian children there but the student population is still predominately black and Hispanic in both schools. The two schools are alike in many respects, but different in others. There were relatively strong bilingual programs in both schools, but whereas the program is fairly well



integrated into the life of one of the schools, it is the center of considerable controversy at the other. At this latter school, from which we drew one of our bilingual study classes, there has been open resentment expressed by the non-bilingual teaching staff over what is perceived to be preferential treatment given to the Hispanic students in the school. Since this is a Title I school, there are special programs available for all of the students, but for reasons that are quite complex, the teachers have come to see the bilingual programs as being on the receiving end of perhaps more services and attention than seems fair to them. At any rate, there were several hostile confrontations between the two communities that developed during the study year when some members of the non-bilingual teaching staff at the school registered complaints to the District administrators that preferential treatment was being given to the "bilinguals" at the school--namely, to the students and teachers involved in the bilingual program. These complaints to the District administrators were investigated, and were found to be unjustified, but they provided evidence there are rather consider social problems that exist between the two communities, at least at the level of the teachers who deal with the educational needs of the children, and that the hostilities that have surfaced between the groups are now being focused on the bilingual programs.

When these problems surfaced, the Hispanic community rallied to the support of the bilingual program staff, and of the principal who, although not Hispanic (he happens to be Black), has been extremely supportive of bilingual education at his school. This show of paren-



tal support for the program helped to quiet some of the difficulty at school, but it did not resolve the problems which apparently still exist below the surface in the school.

Such problems have largely been avoided at School #4, although the same potential for hostility exists there. At this school, the principal has exercised considerable care in insuring that the bilingual program is well-integrated into the larger school, and has, even to the physical housing of the program, kept the program from being seen as a separate entity in the school. There is, in this school, only one bilingual class at each grade level, although there are many more students at each level who also qualify for participation in the bilingual program. The overflow children are placed in all-English classrooms, and hence virtually all of the teachers in the school have had to be involved in the education of Hispanic students who have problems dealing with the language of school, and hence have an interest in what goes on in the bilingual programs. At this school, we had both bilingual (third grade) and all-English (third and fifth grades) study classes.

There are many Hispanic families that qualify as longtime residents of the neighborhoods surrounding both schools. The children in the study, however, are from more recently arrived families since one of our criteria for participation as subjects was that they should have started school as non-English or very limited English speakers. Some of these families were formerly engaged in farm work, but few Hispanic families settle in an urban area such as the one served by District C directly from rural areas. The typical pattern is for a

family to do it in several steps, the first being a move into town (from farm housing) in a rural or semi-rural community, the next being a move into a barrio of a small urban area, and then finally, into a barrio of a large urban area such as the one in which these schools were located.

Some of the families in these neighborhoods are no doubt "undocumented aliens", although this is speculation on our part. We found reason for believing that this may be the case, however on the day of a well-publicized crackdown by "la migra", the U.S. Immigration and Naturalization Service. For a while after the big sweep through the barrio, many children were conspicuously absent from school. Some families took small vacations away from home during that period, others were given trips to Mexico by the government. Within a month, however, things were back to normal, and the children were hard at work in school once again. There was considerable transiency in both of this school, but it was nothing compared to the situation at the third school in District C, from which we drew one of our Hispanic study classes.

School #5: This school was an especially interesting one, since it contained in microcosm, all of the problems found in the inner-city schools of District C. The school is located right at the cusp of three adjoining ethnic neighborhoods--Black, Hispanic and Chinese. Until rather recently, the district was almost exclusively Black in its ethnic makeup. Hence the students who attended School #5 were mostly black children: until 5 years ago, the student population at this school was 90% black. Then the Hispanic families began moving

into the black neighborhoods, since the rentals in this area were somewhat less expensive than in the other parts of town. One of the factors that made it possible for the Hispanic families to find housing here was the high rate of transiency among the Black families. The school reported that during one record-breaking period, there was a turn-over rate of 80% as families moved in and out of the school's attendance area. As families moved out, the houses or apartments became available for rental, and in time Hispanic families had displaced about a fourth of the Black families in the area. At least the population in the school shifted from 90% black, 10% "other" to about 65% black, 25% Hispanic, and 10% others a few years ago. At that time, a bilingual program was established in the school to serve the Hispanic students who were in need of the instructional assistance such programs provide for limited English speakers.

Another major change began to take place three years ago with the massive influx of Southeast Asian refugees. The Chinatown area which adjoins the Black district has been the favored residential area for these newcomers, since many of them are ethnic Chinese. However, the area is quite overcrowded, and there is a severe shortage of inexpensive housing. In fact, it is nearly impossible to find available and affordable apartments or houses there, since once a family finds something, they are not likely to leave it. Hence, with the steady influx of newcomers, it was inevitable that these Asian families should be looking for housing in the neighborhoods in the border area between the black and Asian sections of town. And with the inclination of the Black families to move around, there was the possibility of finding

vacancies in the apartment buildings in the border area. Hence, each time a Black family moved from an apartment, it was replaced by an Asian family. In very short time (two years only), the population of the formerly black neighborhoods has shifted, and become largely Asian. Nowhere is this more apparent than in School #5. Where just a few years ago, the school had been one with a mostly Black student population, it is now only 30% black, 20% Hispanic, and 50% Asian. And nearly every day, new families arrive at the school, hoping to register their children. Most of these newcomers are Asians, but there have been a few other groups as well. One of the more unusual ones has been a rather large number of Tigrinyan-speaking children, refugees from Ethiopia whose families have been recently resettled in the area under the auspices of a United Nations agency. As a result, the school has been bulging with an over-capacity enrollment. It was built for a top capacity of 800 students; at last count there were 1110 students in its classrooms. In fact, every available inch of space in the school has been pressed into service as classroom space. One finds classes meeting in the hallways, in the teacher's lunchroom, and in every broom closet. Finding space in which we might test the subjects from the two study classrooms proved to be a massive exercise in ingenuity for the members of the research team working in that school, especially so since there was at least one other research project studying classes in the school during the year we were there.

A solution for the space problem at School #5 was found recently when the District decided to turn it into a year-around school, with a quarter of the children "on leave" during each period of the school

year.

The social problems that arose when the school began to change in its student population have not been resolved as easily, however. Problems similar to those at School #3 have been observed in the past two years, when the changes in the school became apparent to the staff there. Some of the teachers at the school expressed considerable distress at having to adjust to the needs of a totally different student population. There has been resentment expressed by parents of the Black students in the school, and by their teachers over the cost of the special programs that the district has had to provide for these newcomers because of their language problems. The argument has been that these programs are drawing off resources that should be spent on the education of all of the children in the school; once again, the fairness issue. Here, as at School #3, the issue that seems to be at the heart of the intergroup conflict has been that of equal treatment or fairness in the allocation of resources. But one suspects that the real issues are deeper--they have to do with fear of cultural differences, and of language differences.

There are Black children in all of the bilingual classes, placed there for the purposes of integration. There have been objections to this practice, however. Some of the parents of the Black children have complained that their children are not getting as much out of school as they would in all-English classes. The fear is that because some of the instruction in bilingual classes is conducted in languages other than English, their children will be learning less than they should in school. One irate parent actually sat in his son's

bilingual classroom and recorded each instance of Spanish used by the teacher during the course of a school day in order to establish just how much instruction his son was missing because it was given in a language he did not understand.

The social and cultural differences that have created these conflicts among the adults in the school community have prevented the formation of close relationships among the children too, it seems. All of the classes in the school are integrated, as noted above; that is, there were in all of the bilingual classes in the school (we were in two third grade bilingual classes, one of them Chinese, the other Hispanic) both target group (Chinese or Hispanic) and non-target group students (Blacks or "others"). But while the groups were in the same classrooms, there was little interaction between them. This was especially apparent in the Chinese classes, where the language and cultural barriers between the groups seemed to be insurmountable. In addition to the difficulties these children had in trying to communicate across groups stemming from their not having a language in common, there were also enormous social and interactional style differences that kept them apart. Although the children were seated side by side in the same classrooms, there was virtually no socializing between the two groups. The children talked only to members of their own group, and pretty much ignored the others. This was especially apparent in the Chinese classes, but it was true also of the Hispanic classes. Out in the playground, one sometimes observed some inter-group play, but by and large, the children stayed in their own groups.

School #6: This school was located right in the heart of the city's Chinatown about a half mile from School #5. Unlike School #5, however, with its ethnically mixed student body, this one had Asian students almost exclusively. Most of the children enrolled here were Chinese, but there were also Vietnamese, Cambodians and other Southeast Asian Students. The non-Asians were few and far between--a Mexican child here, a couple of Black children there, and a trace of other groups here and there. The predominant group was the Chinese, here at school and in the neighborhoods that surrounded the school. There was a Chinese community center on the grounds adjoining the school grounds. The commercial district with its busy Chinese markets, restaurants, shops, and sewing factories was located just two blocks beyond the schoolyard. Many of the parents of the children worked here in the many small shops and businesses. Many of them were fairly recent immigrants, and while they were generally a little more established than the parents of the children at School #5, they shared much the same background. Some of them had immigrated to the United States from China by way of Hong Kong. Unlike the earlier immigrants (pre-1967) who spoke the various sze-yip regional dialects of Cantonese, these immigrants generally speak sam-yip dialects, of which the Kwangchow dialect of Hong Kong was the major one. Sizable numbers of residents in this city came as refugees from Southeast Asia. A great many of these are ethnic Chinese, but there are Vietnamese, Cambodians, Laotians, Thais and Burmese, too.

The school itself was almost idyllic in its peacefulness. One seldom saw fights in the school yard, and if children had to be sent



to the office for any reason, it was usually for "talking too much" rather than for fighting, or for disobedience. Among the teachers in this district, School #6 was regarded as "easy duty", despite the fact that many of its students had language problems. Language problems notwithstanding, these children were generally very good students--they worked hard, were cooperative, and were kind to teachers. In short, they were eager students, and they seldom caused trouble; hence they were easy to work with.

In this school there was a fairly active bilingual program, but it was in no way big enough to serve all of the many children in the school who were eligible to be in it. The school had only one bilingual class at each grade level, from kindergarten through the sixth grade. There were at least 3 additional classes for each grade level which were not bilingual.

Children were generally placed in bilingual or all-English classes at the kindergarten level, more or less on a first-come-first-served basis. Usually, only the most limited English speakers were placed in the bilingual program, although if parents insisted, their children might get in, provided there was space. As a result, the bilingual classes at this school generally had a higher concentration of limited English speakers than elsewhere in the District. The third grade bilingual class from this school was involved in the study, as were two of the three all-English third-grade classes.

The principal of the school was not a supporter of bilingual education, and has said he thinks children should not remain in such

classes for more than a year or two at most. In his view, placement in bilingual classes should be reserved for just those students who are the most limited in English, and it should be regarded as temporary. According to the principal, the proper aim of these classes is to teach the LEP students English as quickly as possible, and they should be transitioned out of them as soon as they gain survival skills in that language.

The principal is not alone in these views. A number of the teachers who are not involved in the bilingual program in the school have voiced essentially the same sentiments. The issue of bilingual education has been particularly troublesome at this school. The site administration of the school has kept the program size down to one bilingual class at each level, despite the growing need for more such classes at all levels. There have been efforts, in fact, to reduce the program in the school from its present size. Several years ago, parents who supported the program forced a confrontation with the school's administrative staff over the issue of whether the program should be continued at the school in its present form and size. The parents on the school's advisory committee refused to endorse its consolidated application (which secures funds from the state for a variety of educational programs) unless the bilingual program was included in the plan.

The parents in the school are generally quite supportive of the bilingual program. Indeed, most of them believe in bilingual education, whether their children are in the school's program or not. As might be expected, the great majority of the children classified as

LEP students in the school are not enrolled in the bilingual program, since, as was mentioned earlier, the need for such instructional services far exceeded the available space at each level. But this did not mean that they did not get bilingual education, since Chinese parents are not easily thwarted. Many of the children who were not in the bilingual program, and indeed many of those who were as well attended Chinese school after the school day, where they learned to read, write and think Chinese, in the way that their parents believed proper Chinese children should. .

School #7: This school, in many respects was like School #6, although it was in a different city. Like School #6, it is located in the very heart of the Chinese sector, the one in this city being substantially larger and older than the one in which School #6 is located. However, while the Chinatown area in this city is almost entirely Chinese, the school is not as exclusively Chinese as is School #6. The district (District D) has a desegregation policy which requires that all of the schools in the city be fully integrated. Children are bussed around the city in order to achieve this full integration. Hence, there are Black, Hispanic, Filipino and a variety of other students at this school, while many of the children who live within walking distance of this school are bussed each day to other schools in the district. Not only was the school integrated, the classes generally were as well. In the two bilingual classes involved in the study (a third grade "flip-flop" class involving two teachers, and fifth grade self-contained class) there were students representing the ethnic groups other than the Chinese enrolled in the school.

The groups generally got along fairly well, but while there was more social interaction across groups in the third grade than in the fifth grade class, the groups generally did not mix much.

Another major difference between this school and School #6 was in the size of its bilingual program. At School #7 there were at least 5 Cantonese bilingual classes at each grade level. The principal, and indeed the entire school staff was very supportive of the bilingual program. The bilingual program was an integral part of the school's instructional program rather than a peripheral effort. The teaching staff included both bilingual teachers who were of the same ethnic groups as the children served by the bilingual program, and English monolingual teachers who were not of those groups. These English-monolingual teachers were teamed with bilingual teachers in "flip-flop" arrangements, whereby each team of two teachers, one bilingual and the other English monolingual, served two classes of students, exchanging them on alternate days. On the days that a particular class was with the English monolingual teacher, the students received their instruction in whatever subjects that teacher taught entirely in English. On the days that the class was with the bilingual teacher, they received some of their instruction in the first language. This plan was used in a number of the schools in this district, and it effectively doubled the number of students that could be served in the program (here as everywhere, the number of children that could be accommodated by the bilingual program was limited at least in part by the availability of linguistically qualified teachers. The plan had another important benefit, or so it appears to the observer: By

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involving the English monolingual teaching staff in the bilingual program, some of the social and philosophical differences that divided the faculties of the other schools in the study sample were not so apparent here at this school, or at School #8 which also followed the same plan.

From our conversations and interviews with teachers and administrators in this school, it was clear that there were differences to be found among the teachers as to how they viewed bilingual education philosophically. But the differences had much less to do with the approach (that is, making use of the students' home languages in school for instructional purposes) than with how they viewed the objectives of this approach. There were those who, in agreement with the district's general policy, saw the objective of bilingual instruction, as the means by which the transfer of LES students into all English programs might be facilitated. There were others who told us that such programs ought to be promoting linguistic development and functioning both in English and in the children's home language. How much native language support the children received in their bilingual classes varied considerably, according to our observations. There was, for example a considerable difference to be found between the two classes from this school which were involved in the study. In the third grade class, the children received a short period of Cantonese reading instruction every other day from the teacher aide, this being pretty much the substance of the home language component of the bilingual program. The teacher occasionally commented to the students in their home language, and the aide, when she interacted with the chil-

dren did use the home language, but there was no other use of that language for instructional purposes. In contrast, in the other class--the fifth grade Cantonese class drawn from this school--the children received much more Cantonese instruction. Here, both the teacher and his assistant used Cantonese for instructional purposes. The assistant taught calligraphy, reading, music and art in Cantonese. The teacher taught reading in Chinese, and he conducted some discussions occasionally in that language. Such variation in practice was fairly representative, we believe, of differences in commitment to bilingual education represented among the faculty of the bilingual program. Nevertheless, the general commitment to such an approach was much more favorable at this school than at most of those we have visited, including those at which we have conducted this study. At this school, it was possible for a child to remain in the bilingual program throughout the elementary years, something that was possible at few other schools we have visited. Indeed, there is very strong community support for native language maintenance, at least within the ethnic community. There has been since the early settlement of this Chinatown, parent supported Chinese language schools which many of the children growing up in the community have attended after their regular public school day. A substantial proportion of the Chinese children attending School #7 (whether in the bilingual program or not) attend such schools each day after school. Hence, while the first language instructional component of the bilingual program in this school varied depending on the inclinations and the philosophical bent of the individual teachers, many, if not most of the children in the school were receiving an education in their home language.

School #8: This school, located across town from School #7 in an industrial area was one of those to which children from the Chinatown sector were bussed each day. The school is situated in the neighborhood of a public housing complex whose residents are largely Black. There are also Samoans and some Filipino families living in the development, but few, if any Chinese families.

The school, like most other schools in the district is fairly well integrated. The Black and Samoan students lived in the neighborhood, and walk to school, but the others are bussed in from various parts of the city. Because of the massive bussing program that has been required to achieve this integration of the city's schools, the district has a dual schedule plan, whereby some of the elementary schools begin at 8:00 AM each day, and end at 2:00 PM, while others begin at 9:00 AM and end at 3:00 PM. School #8 was on the early schedule. Hence, the children who were bussed into the school from across town began their school day at a very early hour. The Chinese children in our bilingual third grade study class were picked up at various pickup points in Chinatown as early as 7:00 AM each day, in order to be taken to this school in time for class. Most of them had to leave their homes as early as 6:15 or 6:30 in order to be at the stops when the bus arrived. The teachers and administrators reported an excellent attendance record for these children, despite this unappealing schedule.

However, while School #8 was as well integrated as School #7, the classes themselves were not. The children in the bilingual classes were nearly exclusively Asians (most of them were Chinese, but there



were also a few Vietnamese, Cambodians and Laotians, in those classes as well). Thus, while the children were attending an integrated school, they did not have much contact with anyone other than Asian students who were largely limited English speakers. They arrived at school each day shortly before 8, and while they had a few minutes to socialize with one another in the yard before the bell rang signalling the beginning of the school day, they tended to stay within their own groups. Quite often, the children in our study class would enter the school building before the bell rang on one pretext or another, in an attempt to get into their classrooms even before the beginning of class. Some of the children would do everything they could to avoid being in the schoolyard. During recess, they used every excuse they could find to stay indoors--they had papers that needed finishing, work books to check, and so forth. The cultural differences to be found among the children in School #8 were quite great, hence, it is not surprising that social mixing would not have been easy. But at the same time, the segregated classes did not allow them much of a chance to get to discover whether there were common grounds for interaction. The Asian children were strangers in this neighborhood school. They dressed differently, talked differently, and behaved differently, and they did not fit into the social world of the play-yard. When they could not avoid being outside, they stayed pretty much in their own groups, and hence the other children in the school had little chance to get to know them. At the end of the school day, they climbed back into the busses to be transported back to their own world.

This pattern of integration without interaction is a fairly common one, despite the best intentions of the district administration. The social and linguistic barriers between the ethnic groups in schools such as this one can hardly be broken down just by placing children together under one roof. At the same time, they do not break down easily even when children are fully integrated, and are placed in the same classrooms.

#### 2.4. Characterization of Individual Classrooms

Seventeen classes participated in the study. Their distribution by grade level, program designation, and by language background of the students were as follows:

##### L1 of Students in Classes

|         | Cantonese              | Spanish                |
|---------|------------------------|------------------------|
| Grade 3 | 4 bilingual classes    | 4 bilingual classes    |
|         | 2 English only classes | 3 English only classes |
|         | (6 total)              | (7 total)              |
| Grade 5 | 1 bilingual class      | 1 bilingual class      |
|         | 1 English only class   | 1 English only class   |
|         | (2 total)              | (2 total)              |

In this report, each class is referred to by a unique code which indicates its grade level (i.e., "3" or "5"), the L1 background of the students (i.e., "C" for Cantonese or "S" for Spanish), and a class number (1 to 7). Thus, the class which is referred to throughout as "3S1" is a third grade Spanish class which is the first of seven such

classes. The first four third grade classes on this numbered list are the bilingual ones (classes 1 through 4), while the others are English only (classes 5 through 7). The two bilingual fifth grade classes are designated "1"'s in our class codes, while the English only classes are "2"'s. The following is a listing of the class codes:

| List of Students in Classes |                      |                      |
|-----------------------------|----------------------|----------------------|
|                             | Cantonese            | Spanish              |
| Grade 3                     | Bilingual classes    | Bilingual classes    |
|                             | 3C1                  | 3S1                  |
|                             | 3C2                  | 3S2                  |
|                             | 3C3                  | 3S3                  |
|                             | 3C4                  | 3S4                  |
|                             | English only classes | English only classes |
|                             | 3C5                  | 3S5                  |
|                             | 3C6                  | 3S6                  |
| Grade 5                     |                      | 3S7                  |
|                             | Bilingual class      | Bilingual class      |
|                             | 5C1                  | 5S1                  |
|                             | English only class   | English only class   |
|                             | 5C2                  | 5S2                  |

#### 2.4.1. Demographic Variables

Classrooms participating in the study varied considerably on a number of dimensions that can be relevant to the amount of peer interaction and amount of English versus first language input target children received. The data to be presented concerns four types of demographic information -- the relative percentages of children capable of speaking different languages in the classroom, the distribution of ethnic categories in the classrooms, the proportion of foreign-born to U.S.-born students in the classrooms, and the number of children in each classroom who spoke little or no English at the beginning of the year.

#### 2.4.1.1. Language Background of Children

Tables 2.1 to 2.3 and Figures 2.1a to c display the percentages of children speaking various languages in the different classrooms at the third and fifth grade in the Spanish and Chinese samples. For the purposes of these tallies, a distinction was not made about whether a language was learned first, second, or third in a child's life. Consequently, some of the categories total more than 100%. It should be noted that because a number of children entered and left classrooms during the year, it was necessary to calculate two percentages for many cells of the tables. The first number indicates the percentage of speakers of a language who were present in the classroom during the entire year (or at least from October of 1981 to May of 1982). Numbers inside parentheses indicate percentages of speakers who were present in classrooms at any time during the school year.

In this regard, it should be noted that the Chinese classrooms in the sample were on the whole much more stable in terms of students arriving or leaving during the year than were the Spanish classrooms. That is, the Spanish classrooms exhibited much higher transience of students, with one bilingual classroom having 43.6% of its students arrive or leave between October and May. In general, 21.4% of the students in the Hispanic classrooms were transient, versus 8.6% of the students in the Chinese classrooms. This difference was statistically significant (chi square = 17.8, df = 1,  $p < .001$ ). However, for the most part, the percentages of children in each language-speaking group arriving or leaving during the year were approximately proportional to their frequency in the classrooms. That is, no one language-speaking

Table 2.1

Percentage Speakers of Various Languages  
in Hispanic Classrooms<sup>a</sup>

|                                    | English Only             | Spanish     | Tagalog | Chinese, Vietnamese<br>Cambodian, Laotian | Others:<br>Hebrew,<br>Hindi |
|------------------------------------|--------------------------|-------------|---------|---|-----------------------------|
| 3rd B11<br>(N=147)                 | 15.0 (19.0) <sup>b</sup> | 61.6 (81.0) | .7      | -   | -                           |
| 3rd All-Eng<br>(N=94)              | 50.0 (66.6)              | 26.6 (30.0) | 1.1     | (1.1)                                     | 2.1                         |
| Total 3rd<br>Grade<br>(N=241)      | 28.6 (37.3)              | 48.5 (61.0) | .8      | (.4)                                      | .8                          |
| 5th B11<br>(N=35)                  | 25.7 (42.9)              | 48.6 (57.1) | -       | -   | (2.9)                       |
| 5th All-Eng<br>(N=32)              | 43.8                     | 40.6 (43.8) | 3.1     | 9.4                                       | -                           |
| Total 5th<br>Grade<br>(N=67)       | 34.3 (43.3)              | 44.8 (50.7) | 1.5     | 4.5                                       | (1.5)                       |
| Total Spanish<br>Sample<br>(N=308) | 30.0 (38.6)              | 47.7 (58.8) | 1.0     | 1.0 (1.3)                                 | .7 (1.0)                    |

Note. Percentages within classroom, type of classroom, and age group may not sum to 100%, since some trilingual children were counted more than once.

<sup>a</sup> The base number of students in each classroom on which the percentages were calculated included children who were in the classroom the whole year and also those who arrived after October of 1981 or left before May 1982.

<sup>b</sup> Numbers outside parentheses indicate percentages of speakers of each language who were present in the classroom the whole year. Numbers inside parentheses indicate percentages of speakers who were in a classroom all or only part of the year.

Table 2.2  
Percentage Speakers of Various Languages  
in Chinese Classrooms<sup>a</sup>

|                             | English Only            | Cantonese   | Other<br>Chinese Dialects | Vietnamese  | Other SE<br>Asian Lang. | Spanish   |
|-----------------------------|-------------------------|-------------|---------------------------|-------------|-------------------------|-----------|
| 3rd Bil<br>(N=123)          | 9.8 (10.6) <sup>b</sup> | 69.9 (80.5) | 17.1                      | 16.3 (17.9) | 1.6                     | -         |
| 3rd All-Eng<br>(N=65)       | 9.2                     | 58.5 (66.2) | -(1.5)                    | 21.5 (27.7) | 7.7 (9.2)               | 4.6 (6.2) |
| Total 3rd<br>(N=188)        | 9.6 (10.1)              | 66.0 (75.5) | 11.2(11.7)                | 18.1 (21.3) | 3.7 (4.3)               | 1.6 (2.1) |
| 5th Bil<br>(N=30)           | 6.7 (6.7)               | 93.3 (93.3) | 23.3 (23.3)               | 26.7 (26.7) | -                       | -         |
| 5th All-Eng<br>(N=30)       | 20.0 (20.0)             | 60.0 (60.0) | 3.3 (3.3)                 | 20.0 (20.0) | -                       | -         |
| Total 5th<br>(N=60)         | 13.3                    | 76.7        | 13.3                      | 23.3        | -                       | -         |
| Total<br>Chinese<br>(N=248) | 10.5 (10.9)             | 68.5 (75.8) | 11.7 (12.1)               | 19.4 (21.8) | 2.8 (3.2)               | 1.2 (1.6) |

Note. Percentages within classroom, type of classroom, and age group may not sum to 100%, since some trilingual children were counted more than once.

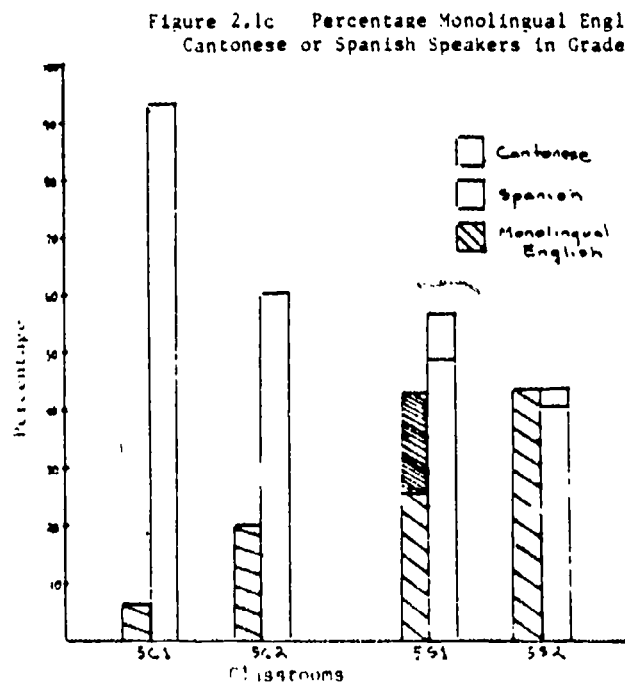
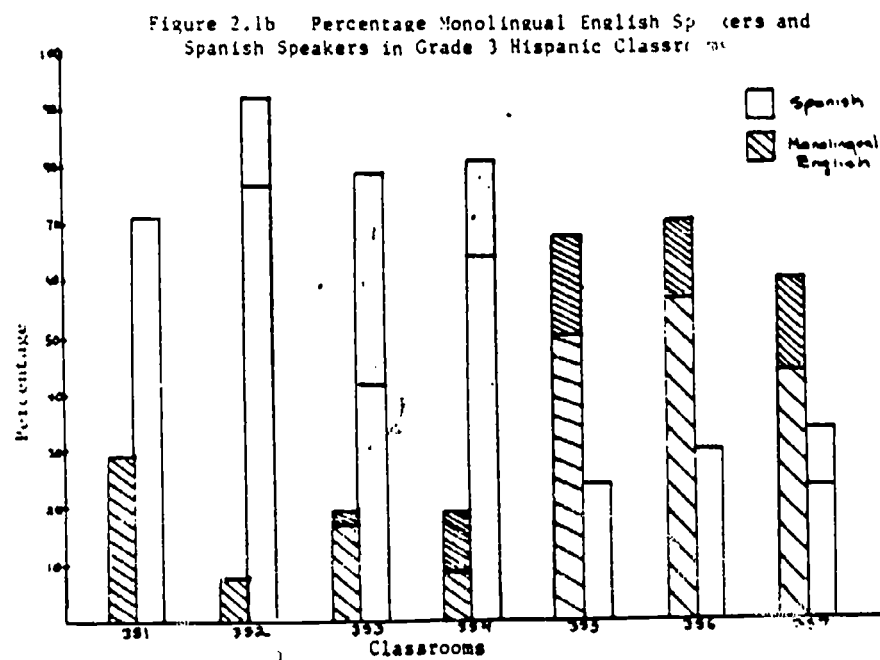
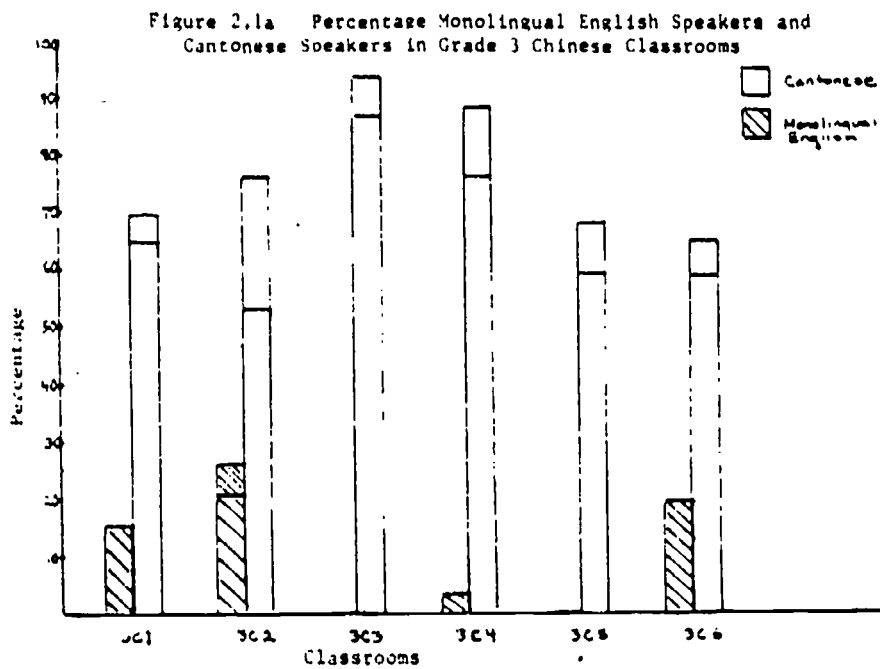
<sup>a</sup>The base number of students in each classroom on which the percentages were calculated included children who were in the classroom the whole year and also those who arrived after October of 1981 or left before May 1982.

<sup>b</sup>Numbers outside parentheses indicate percentages of speakers of each language who were present in the classroom the whole year. Numbers inside parentheses represent percentages of speakers who were in a classroom all or only part of the year.

Table 2.3  
Percentages of Speakers of Various Languages  
by Grade and Classroom

|                         | Monoling.<br>English | Cantonese   | Other<br>Chinese Dialects | Vietnamese  | Other<br>S.E. Asian | Spanish     | Other     |
|-------------------------|----------------------|-------------|---------------------------|-------------|---------------------|-------------|-----------|
| <u>Grade 3 Chinese</u>  |                      |             |                           |             |                     |             |           |
| 3C1 N=26                | 15.4 (15.4)          | 65.4 (69.2) | 11.5 (11.5)               | 7.7 (7.7)   |                     |             |           |
| 3C2 N=34                | 20.6 (26.5)          | 52.9 (70.6) | 8.9 (8.9)                 | 38.2 (44.1) | (2.9) (2.9)         |             |           |
| 3C3 N=30                |                      | 86.7 (93.3) |                           | 13.4 (13.4) |                     |             |           |
| 3C4 N=33                | 3.0 (3.0)            | 75.8 (87.9) | 36.4 (36.4)               | 3.0 (3.0)   | 3.0 (3.0)           |             |           |
| 3C5 N=34                |                      | 58.8 (67.6) |                           | 14.7 (26.5) | 8.8 (11.8)          | 8.8 (11.8)  |           |
| 3C6 N=31                | 19.4 (19.4)          | 58.1 (64.5) | 0 (3.2)                   | 29.0 (29.0) | 6.5 (6.5)           |             |           |
| <u>Grade 3 Hispanic</u> |                      |             |                           |             |                     |             |           |
| 3S1 N=31                | 29.0 (29.0)          |             |                           |             |                     | 71.0 (71.0) |           |
| 3S2 N=39                | 7.7 (7.7)            |             |                           |             |                     | 76.9 (92.3) |           |
| 3S3 N=41                | 17.1 (22.0)          |             |                           |             |                     | 41.5 (78.0) |           |
| 3S4 N=36                | 8.3 (19.4)           |             |                           |             |                     | 63.9 (80.6) |           |
| 3S5 N=34                | 50.0 (67.6)          |             |                           | 0.0 (2.9)   | 2.9 (2.9)           | 26.5 (26.5) |           |
| 3S6 N=30                | 56.7 (70.0)          |             |                           |             |                     | 30.0        |           |
| 3S7 N=30                | 43.3 (60.0)          |             |                           |             |                     | 23.3 (33.3) | 6.7 (6.7) |
| <u>Grade 5 Chinese</u>  |                      |             |                           |             |                     |             |           |
| 5C1 N=30                | 6.7 (6.7)            | 93.3 (93.3) | 23.3 (23.3)               | 26.7 (26.7) |                     |             |           |
| 5C2 N=30                | 20.0 (20.0)          | 60.0 (60.0) | 3.3 (3.3)                 | 20.0 (20.0) |                     |             |           |
| <u>Grade 5 Hispanic</u> |                      |             |                           |             |                     |             |           |
| 5S1 N=35                | 25.7 (42.9)          |             |                           |             |                     | 48.6 (57.1) | 0.0 (2.9) |
| 5S2 N=32                | 43.8 (43.8)          |             |                           |             | 12.5 (12.5)         | 40.6 (43.8) |           |





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group was over-represented in this transient population. (See Table 2.4 for data concerning transience frequencies and proportions within the various language groups.)

Returning to the above tables and figures concerning the languages spoken by children in the target classrooms, a number of interesting contrasts can be seen between the Spanish and Chinese classrooms (Tables 2.1, 2.2, and 2.3, and Figures 2.1a to c). The Chinese classrooms, both bilingual and all-English at both the third and fifth grades were predominantly composed of Cantonese-speaking children and had relatively small numbers of monolingual English speakers in them. As can be seen, the percentages of monolingual English speakers in these classrooms ranged from 0 to 26.5 but averaged only 10.1% in the third grades and 13.3% in the fifth grades. In the Spanish sample the third grade bilingual classrooms look much like all the Chinese classrooms, with a large proportion of speakers of the minority language (here Spanish) and a much lower percentage of monolingual English speakers (ranging from 7.7 to 29% and averaging 19.0%). However, the Spanish third grade all-English classrooms were strikingly different in composition, with a much higher percentage of monolingual English speakers (ranging from 50 to 70%). The two Spanish fifth grade classrooms exhibited a still different pattern, with approximately equivalent numbers of Spanish speakers and monolingual English speakers.

Another difference between the Chinese and Spanish classrooms was that the Chinese classrooms contained a considerable percentage of children speaking languages other than just English or Cantonese.

Table 2.4

Transience of Students in Classrooms  
By Grade and Ethnicity

| Grade by Ethnicity,<br>Classroom Type,<br>and Classroom | Numbers of Speakers Arriving or Leaving |                       |                     |                                |
|---|---|-----------------------|---------------------|--------------------------------|
|   | Engl. Monol.<br>Speakers                | Cantonese<br>Speakers | Spanish<br>Speakers | Speakers of Other<br>Languages |
| Grade 3 Chinese   | 2(10.5) <sup>a</sup>                    | 18(12.7)              |                     | 3                              |
| Bilingual   | 2(15.4)                                 | 13(13.1)              |                     |                                |
| All-English   | 0                                       | 5(11.6)               | 1                   | 3                              |
| 3C1   | 0                                       | 1                     |                     |                                |
| 3C2   | 2                                       | 6                     |                     |                                |
| 3C3   | 0                                       | 2                     |                     |                                |
| 3C4   | 0                                       | 4                     |                     |                                |
| 3C5   | 0                                       | 3                     | 1                   | 3                              |
| 3C6   | 0                                       | 2                     |                     |                                |
| Grade 5 Chinese   | 0                                       | 0                     |                     |                                |
| Total Chinese Sample                                    | 2(7.4)                                  | 18(9.6)               | 1                   | 3                              |
| Grade 3 Hispanic  | 21(23.3)                                |                       | 30(20.7)            |                                |
| Bilingual   | 6(21.4)                                 |                       | 27(23.1)            |                                |
| All-English   | 15(24.2)                                |                       | 3(10.7)             |                                |
| 3S1   | 0                                       |                       | 0                   |                                |
| 3S2   | 0                                       |                       | 6                   |                                |
| 3S3   | 2                                       |                       | 15                  |                                |
| 3S4   | 4                                       |                       | 6                   |                                |
| 3S5   | 6                                       |                       | 0                   |                                |
| 3S6   | 4                                       |                       | 0                   |                                |
| 3S7   | 5                                       |                       | 3                   |                                |
| Grade 5 Hispanic  | 6(20.7)                                 |                       | 4(11.8)             | 1                              |
| Total Hispanic Sample                                   | 27(22.7)                                |                       | 34(19.0)            | 1                              |

<sup>a</sup> Numerals in parentheses represent the percentages of transient students relative to the total numbers of students speaking each language

Overall 12.1% of children in the Chinese classrooms spoke another Chinese dialect, 21.8% spoke Vietnamese, 3.2% spoke another Southeast Asian language like Burmese or Laotian, and 1.6% spoke Spanish. In a large number of cases this was the result of children speaking multiple dialects and languages--three and sometimes four languages or dialects. In the Spanish sample of classrooms on the other hand, only about 3% of the children in the classrooms were identified as speaking a language other than Spanish or English.

#### 2.4.1.2. Ethnic Background of Children

Table 2.5 shows the distribution of children in the target classrooms by ethnic background. Again the first number represents the percentage of children who were in the classroom for the entire school year (from October to May); the number in parentheses represents the percentage of children who were in the classroom at any time during the school year.

It is obvious from the tables that Chinese children tended to predominate more in their classes than did Hispanic children. Chinese children constituted 75.1% of their classes, whereas Hispanic children constituted 58.7% of their classes. This difference was statistically significant (chi square = 14.91, df = 1,  $p < .001$ ). There were also fewer Caucasians and fewer blacks in the classes with our Chinese students. Taken together, the percent of Caucasians and blacks in the classes containing our Chinese children was 10.2%, while it was 35.5% in the classes containing our Hispanic subjects. This difference was statistically significant (chi square = 53.1, df = 1,  $p < .001$ ).

Table 2.5

Percentage of Students of Different Ethnic Backgrounds  
by Grade, Ethnicity, and Type of Classroom

| Classroom Type   | n <sup>a</sup> | Chinese     | Black       | Hispanic    | Caucasian   | Other Asian | Other       |
|------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Grade 3 Chinese  | 173 (195)      | 73.9 (73.8) | 7.5 (7.2)   | 1.7 (1.5)   | 2.9 (2.6)   | 9.8 (10.8)  | 4.0 (4.1)   |
| Bilingual        | 110 (123)      | 84.5 (85.4) | 9.1 (8.9)   | -           | -           | 3.6 (3.3)   | 2.7 (2.4)   |
| All-English      | 63 (72)        | 54.7 (54.2) | 4.7 (4.2)   | 4.7 (4.2)   | 7.8 (6.9)   | 20.3 (23.6) | 7.8 (6.9)   |
| Grade 3 Hispanic | 205 (268)      |             | 18.5 (19.0) | 61.4 (61.5) | 16.0 (15.2) |             | 2.4 (2.2)   |
| Bilingual        | 129 (173)      |             | 14.7 (15.0) | 79.1 (78.6) | 3.1 (2.9)   |             | 0.7 (0.7)   |
| All-English      | 76 (95)        |             | 25.0 (26.3) | 31.6 (30.5) | 38.2 (37.8) |             | 5.3 (5.2)   |
| Grade 5 Chinese  | 60             | 78.3        | 5.0         | -           | 5.0         | 10.0        | 1.6         |
| Bilingual        | 30             | 86.7        | 10.0        | -           | -           | 3.3         | -           |
| All-English      | 30             | 70.0        | -           | -           | 10.0        | 16.7        | 3.3         |
| Grade 5 Hispanic | 59 (68)        |             | 20.0 (19.1) | 49.1 (48.5) | 16.9 (22.0) |             | 11.8 (10.2) |
| Bilingual        | 27 (35)        |             |             | 63.0 (57.1) | 37.0 (42.8) |             |             |
| All-English      | 32 (33)        |             | 40.6 (39.3) | 37.5 (39.3) |             |             | 21.8 (21.2) |
| Total Chinese    | 233 (255)      | 75.1 (74.9) | 6.8 (6.7)   | 1.3 (1.2)   | 3.4 (3.1)   | 9.9 (10.6)  | 3.4 (3.5)   |
| Total Hispanic   | 264 (336)      |             | 19.3 (19.0) | 58.7 (58.9) | 16.2 (16.6) |             | 4.5 (3.8)   |

<sup>a</sup> Numerals outside parentheses indicate the number of students in each group who were in the classrooms for the entire year. Numerals inside the parentheses indicate the number who were present in the classrooms at any time during the school year.

For both Chinese and Hispanic samples, the bilingual classes contained a greater percentage of children of the same ethnic group as our target subjects than did the all-English classes. Across the third and fifth grade samples, the percentage of Chinese was 85% in the bilingual classes and 60.2% in the all-English classes. This difference was significant (chi square = 18.4, df = 1,  $P < .001$ ). For the Hispanic classes the percent of Spanish in the bilingual classes was 76.2% and 33.3% in the all-English classes. Again the difference was statistically significant (chi square = 48.6, df = 1,  $p < .001$ ).

Table 2.6 shows the percentage of students of different ethnic backgrounds by grade and classroom. It can be seen from the table that the Chinese all-English classrooms (3C5 and 3C6) contained the greatest variety of children from different ethnic backgrounds, as did the Hispanic all-English classrooms (3S5, 3S6, and 3S7).

#### 2.4.1.3. Foreign Born Children in Target Classrooms

Table 2.7 shows the percentages of children born in this country and elsewhere. The children in the Hispanic classrooms tended to be born predominantly in the United States (54.3%), whereas this was less likely to be the case in the Chinese classes (31.2%). This difference was statistically significant (chi square = 24.0, df = 1,  $p < .001$ ).

Children in bilingual classes were more likely to be born outside the country than were children in all-English classes, especially at the third grade level. In the Chinese third-grade classes 76.8% of the children in the bilingual classes were born outside of the U.S.,

Table 2.6

Percentage of Students of Different Ethnic  
Backgrounds by Grade and Classroom

|                         | Chinese     | Black       | Hispanic    | Caucasian   | Other Asian | Other     | Missing   |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-----------|-----------|
| <u>Grade 3 Chinese</u>  |             |             |             |             |             |           |           |
| 3C1                     | 87.5 (87.9) | 12.5 (11.9) |             |             |             |           |           |
| 3C2                     | 69.2 (72.7) | 26.9 (24.2) |             |             | 3.8 (3.0)   |           |           |
| 3C3                     | 93.3 (93.7) |             |             |             | 6.6 (6.2)   |           |           |
| 3C4                     | 89.6 (87.8) |             |             |             | 6.8 (9.0)   | 3.4 (3.0) |           |
| 3C5                     | 50.0 (50.0) | 9.3 (7.8)   | 6.2 (5.2)   | 3.1 (6.2)   | 25.0 (28)   | 6.2 (5.2) |           |
| 3C6                     | 59.3 (60.6) |             | 3.1 (3.0)   | 12.5 (12.1) | 15.6 (18.1) | 9.3 (6.0) |           |
| <u>Grade 3 Hispanic</u> |             |             |             |             |             |           |           |
| 3S1                     |             | 29 (29)     | 70.9 (70.9) |             |             |           |           |
| 3S2                     |             |             | 87.7 (88.1) | 8.1 (6.7)   |             | 4.0 (5.0) | 4.3 (4.5) |
| 3S3                     |             | 30.4 (27.2) | 65.2 (68.1) |             |             |           | 3.9 (2.5) |
| 3S4                     |             | 11.5 (12.8) | 84.6 (82)   | (2.5)       |             |           |           |
| 3S5                     |             | 55.5 (60)   | 33.5 (28.5) | 3.7 (2.8)   |             | 7.4 (8.5) |           |
| 3S6                     |             | 8.1 (6.6)   | 30.6 (31.6) | 57.1 (58.3) |             | 4.0 (3.3) |           |
| <u>Grade 5 Chinese</u>  |             |             |             |             |             |           |           |
| 5C1                     | 86.6 (86.6) | 10.0 (10)   |             |             | 3.3 (3.3)   |           |           |
| 5C2                     | 69.9 (69.9) |             |             | 10.0 (10)   | 16.6 (16.6) | 3.3 (3.3) |           |
| <u>Grade 5 Hispanic</u> |             |             |             |             |             |           |           |
| 5S1                     |             |             | 62.9 (57.1) | 37.0 (42.8) |             |           |           |
| 5S2                     |             | 40.6 (39.3) | 37.5 (39.3) | 21.8 (21.2) |             |           |           |

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Table 2.7

Percentage of Students According to Place of Birth  
by Grade, Ethnicity, and Type of Classroom

| Classroom Type   | n <sup>a</sup> | Place of Birth |        |       |        |           |        |         |        |        |        |       |        |         |        |
|------------------|----------------|----------------|--------|-------|--------|-----------|--------|---------|--------|--------|--------|-------|--------|---------|--------|
|                  |                | US             |        | China |        | Hong Kong |        | Vietnam |        | Mexico |        | Other |        | Missing |        |
| Grade 3 Chinese  | 173 (195)      | 27.7           | (26.8) | 19.2  | (20.0) | 18.6      | (16.8) | 27.7    | (29.4) |        |        | 4.2   | (4.2)  | 2.4     | (2.6)  |
| Bilingual        | 110 (123)      | 24.2           | (23.7) | 25.2  | (25.4) | 20.5      | (18.8) | 27.1    | (28.6) |        |        | 1.8   | (1.6)  | 0.0     | (1.6)  |
| All-English      | 63 (72)        | 33.8           | (32.3) | 8.4   | (10.2) | 15.2      | (13.2) | 28.8    | (30.8) |        |        | 8.4   | (8.8)  | 5.0     | (4.4)  |
| Grade 3 Hispanic | 205 (268)      | 55.3           | (53.3) |       |        |           |        |         |        | 35.4   | (36.0) | 2.9   | (2.6)  | 6.3     | (7.8)  |
| Bilingual        | 129 (173)      | 42.4           | (39.1) |       |        |           |        |         |        | 45.4   | (46.7) | 2.2   | (1.7)  | 9.8     | (12.2) |
| All-English      | 78 (95)        | 78.3           | (78.9) |       |        |           |        |         |        | 17.5   | (16.8) | 4.0   | (4.2)  |         |        |
| Grade 5 Chinese  | 60             | 44.9           |        | 3.3   |        | 20.0      |        | 31.6    |        |        |        |       |        |         |        |
| Bilingual        | 30             | 40.0           |        | 6.6   |        | 23.3      |        | 10.0    |        |        |        |       |        |         |        |
| All-English      | 30             | 50.0           |        | -     |        | 16.6      |        | 31.3    |        |        |        |       |        |         |        |
| Grade 5 Hispanic | 59 (68)        | 50.8           | (51.4) |       |        |           |        |         |        | 38.9   | (38.2) | 8.4   | (8.8)  | 1.6     | (1.4)  |
| Bilingual        | 27 (35)        | 48.1           | (51.4) |       |        |           |        |         |        | 51.8   | (45.7) | 0.0   | (2.8)  |         |        |
| All-English      | 12 (33)        | 51.1           | (51.5) |       |        |           |        |         |        | 28.1   | (30.3) | 15.6  | (15.1) | 3.1     | (3.0)  |
| Total Chinese    | 233 (255)      | 32.1           | (31.2) | 15.0  | (15.9) | 19.0      | (17.5) | 28.7    | (30.0) |        |        | 3.0   | (3.2)  | 1.7     | (1.9)  |
| Total Hispanic   | 264 (336)      | 54.3           | (52.9) |       |        |           |        |         |        | 36.2   | (36.5) | 4.1   | (3.8)  | 5.2     | (6.5)  |

<sup>a</sup> Numerals outside parentheses indicate the number of students in each group who were in the classrooms for the entire year. Numerals inside the parentheses indicate the number who were present in the classrooms at any time during the school year.

whereas in the all-English third-grade classes the figure was 66.2%. In the Hispanic third-grade classes 54.6% of the children in the bilingual classes were born outside of the U.S., whereas in the all-English third-grade classes the figure was only 21.5%.

There was greater diversity in the origins of children in the Chinese classes than in the Hispanic classes (Table 2.8). The Hispanic children tended to come from Mexico or to have been born in the U.S. 67% of the children in the Chinese classes were born in China, Hong Kong, Vietnam, or other Asian countries.

#### 2.4.1.4. NES and Low LES Children in Target Classrooms

Turning to the question of how many children in each classroom spoke little or no English, since we ourselves did not administer language tests to all members of each class, we counted the number of students in each class who either were in an English-speaking classroom for the first time or who had experienced only between one month and one year of schooling in the U.S. during the previous year. Although this gives only an approximate idea of the number of NES and low LES students (since children learn language at very different rates) it probably does provide a rough count of the number of children who were in the beginning stages of learning English in each classroom and grade X ethnicity group. It should be noted that these tallies include children whose first language was any other language except English, not just children whose first language was either Cantonese or Spanish. Table 2.9 displays the percentages of students with little or no previous instruction in English prior to the study year

Table 2.8

Percentages of Foreign Born Students  
by Grade and Classroom

|                         | US          | China       | Mexico      | Hong Kong   | Viet Nam    | Other       | Missing     |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <u>Grade 3 Chinese</u>  |             |             |             |             |             |             |             |
| 3C1                     | 50.0 (47.9) | 16.6 (15.9) |             | 20.8 (23.9) | 12.5 (11.9) |             |             |
| 3C2                     | 26.9 (23.5) | 3.8 (5.8)   |             |             | 61.5 (61.7) | 3.8 (2.9)   | 3.8 (5.8)   |
| 3C3                     | 3.5 (3.3)   | 53.5 (53.3) |             | 17.8 (16.6) | 25 (26.6)   |             |             |
| 3C4                     | 20.6 (24.2) | 24.1 (27.2) |             | 41.3 (36.3) | 10.3 (9)    | 3.4 (3)     |             |
| 3C5                     | 37.0 (32.3) | 14.8 (14.7) |             | 14.8 (11.7) | 25.9 (32.3) | 7.4 (8.8)   |             |
| 3C6                     | 31.2 (32.3) | 3.1 (5.8)   |             | 15.6 (14.7) | 31.2 (29.4) | 9.3 (8.8)   | 9.3 (8.8)   |
| <u>Grade 3 Hispanic</u> |             |             |             |             |             |             |             |
| 3S1                     | 29 (29)     |             | 70.9 (70.9) |             |             |             |             |
| 3S2                     | 47.9 (43.1) |             | 27.0 (29.3) |             |             |             | 25.0 (27.5) |
| 3S3                     | 48.1 (38.6) |             | 40.7 (54.5) |             |             | 7.4 (4.5)   | 3.7 (2.2)   |
| 3S4                     | 42.3 (42.1) |             | 53.8 (44.7) |             |             | 3.8 (2.6)   | 0 (10.5)    |
| 3S5                     | 81.4 (82.8) |             | 14.8 (11.4) |             |             | 3.7 (5.7)   |             |
| 3S6                     | 76.5 (76.6) |             | 19.1 (20)   |             |             | 4.2 (3.3)   |             |
| <u>Grade 5 Chinese</u>  |             |             |             |             |             |             |             |
| 5C1                     | 40 (40)     | 6.6 (6.6)   |             | 23.3 (23.3) | 30 (30)     |             |             |
| 5C2                     | 50 (50)     |             |             | 16.6 (16.6) | 33.3 (33.3) |             |             |
| <u>Grade 5 Hispanic</u> |             |             |             |             |             |             |             |
| 5S1                     | 48.1 (51.4) |             | 51.8 (45.7) |             |             | 3.0 (2.8)   |             |
| 5S2                     | 53.1 (51.5) |             | 28.1 (30.3) |             |             | 15.6 (15.1) | 3.1 (3)     |

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Table 2.9

Percentages of Students with Little or No Previous Instruction  
In English Prior to Study Year by Grade, Ethnicity, and Classroom Type

| Grade by Ethnicity<br>and Classroom Type     | No Previous<br>Instruction |                       | Less Than 1 Year<br>Instruction |                       | Total NES and<br>Low LES |                       |
|--|----------------------------|-----------------------|---------------------------------|-----------------------|--------------------------|-----------------------|
|  | Stable                     | Stable &<br>Transient | Stable                          | Stable &<br>Transient | Stable                   | Stable &<br>Transient |
| Grade 3 Chinese<br>(n= 163,194) <sup>a</sup> | 4.3                        | 7.2                   | 18.4                            | 19.1                  | 22.7                     | 26.3                  |
| Bilingual<br>(n= 108,129)                    | 4.6                        | 8.5                   | 23.1                            | 23.3                  | 27.8                     | 31.8                  |
| All-English<br>(n= 55, 65)                   | 3.6                        | 4.6                   | 9.1                             | 10.8                  | 12.7                     | 15.4                  |
| Grade 3 Hispanic<br>(n= 189, 241)            | 2.1                        | 2.9                   | 5.8                             | 5.0                   | 7.9                      | 7.9                   |
| Bilingual<br>(n= 115, 147)                   | 3.5                        | 4.1                   | 7.0                             | 6.1                   | 10.4                     | 10.2                  |
| All-English<br>(n= 74, 94)                   | 0.0                        | 1.1                   | 4.1                             | 3.2                   | 4.1                      | 4.3                   |
| Grade 5 Chinese<br>(n=56, 60)                | 1.8                        | 1.7                   | 12.5                            | 11.7                  | 14.3                     | 13.3                  |
| Bilingual<br>(n=26,30)                       | 3.8                        | 3.3                   | 11.5                            | 10.0                  | 15.4                     | 13.3                  |
| All-English<br>(n= 30)                       | 0.0                        | 0.0                   | 13.3                            | 13.3                  | 13.3                     | 13.3                  |
| Grade 5 Hispanic<br>(n= 57, 68)              | 7.0                        | 10.3                  | 0.0                             | 0.0                   | 7.0                      | 10.3                  |
| Bilingual<br>(n= 26, 35)                     | 11.5                       | 11.4                  | 0.0                             | 0.0                   | 11.5                     | 11.4                  |
| All-English<br>(n= 31,33)                    | 3.2                        | 9.1                   | 0.0                             | 0.0                   | 3.2                      | 9.1                   |
| Total Chinese<br>(n= 219,254)                | 3.7                        | 5.9                   | 16.9                            | 17.3                  | 20.5                     | 23.2                  |
| Total Hispanic<br>(n= 246,309)               | 3.3                        | 4.5                   | 4.5                             | 3.9                   | 7.7                      | 8.4                   |

<sup>a</sup> The first sample 'n' indicates the number of students who were in the group for the entire year. The second numeral indicates the number who were present in the group at any time during the school year.

by grade, ethnicity, and type of classroom. As in previous counts, two separate calculations have been done for each category of student, one giving the percentage of NES and low LES among the stable members of each class, and one giving the percentage of NES and low LES among both stable and transient members of each class. Overall, the percentage of children in the classes with no previous exposure to schooling in the U.S. was fairly low. Only 3.7% of the children in our Chinese classrooms for the entire year were non-English-speaking by this criterion. In the Hispanic classes, the percentage was about the same -- 3.3%. However, the percentage was larger in the Grade 5 Hispanic bilingual classroom, where 3 of the 26 stable class members were newcomers to American schooling. When the category of children with some exposure to English during the previous school year is added to the previous count, a different picture emerges. Within the Chinese classrooms overall, 20.5% of the stable class members had had one or less years of schooling in the U.S., whereas only 7.7% of the students in the Hispanic classrooms fit that classification. The percentage of NES and low LES students was especially high in the Grade 3 Chinese bilingual classrooms where better than a quarter of the students were relative newcomers (27.8%). At the third grade, for both Chinese and Hispanic classrooms, there were more than twice the number of children in the bilingual as in the all-English classrooms with one year or less of English schooling. Three of the four fifth grade classrooms had approximately the same number of relative newcomers among the stable class members (3 or 4), but the Hispanic fifth grade all-English classroom only had one such student. Table 2.10 presents the same data for each classroom separately. This table indicates

Table 2.10

Percentages of Students with Little or No Previous Instruction  
In English Prior to Study Year by Classroom

| Classrooms                 | No Previous Instruction |           | One Y. or Less Instruction |           | Total NES and Low LES |           |
|----------------------------|-------------------------|-----------|----------------------------|-----------|-----------------------|-----------|
|                            | Stable & Transient      |           | Stable & Transient         |           | Stable & Transient    |           |
|                            | Stable                  | Transient | Stable                     | Transient | Stable                | Transient |
| <u>Grade 3 Chinese</u>     |                         |           |                            |           |                       |           |
| 3C1 (n=25,32) <sup>a</sup> | 0.0                     | 6.3       | 0.0                        | 12.5      | 0.0                   | 18.8      |
| 3C2 (n=26,34)              | 15.4                    | 17.6      | 23.1                       | 20.6      | 38.5                  | 38.2      |
| 3C3 (n=28,30)              | 3.6                     | 6.7       | 32.1                       | 30.1      | 35.7                  | 36.7      |
| 3C4 (n=29,33)              | 0.0                     | 3.0       | 34.5                       | 30.3      | 34.5                  | 33.3      |
| 3C5 (n=26,34)              | 7.7                     | 8.8       | 15.4                       | 14.7      | 23.1                  | 23.5      |
| 3C6 (n=29,31)              | 0.0                     | 0.0       | 3.4                        | 6.5       | 3.4                   | 6.5       |
| <u>Grade 3 Hispanic</u>    |                         |           |                            |           |                       |           |
| 3S1 (n=31)                 | 3.2                     | 3.2       | 16.1                       | 16.1      | 19.4                  | 19.4      |
| 3S2 (n=35,39)              | 0.0                     | 0.0       | 0.0                        | 0.0       | 0.0                   | 0.0       |
| 3S3 (n=24,41)              | 8.3                     | 7.3       | 8.3                        | 4.9       | 16.7                  | 12.2      |
| 3S4 (n=25,36)              | 4.0                     | 5.6       | 8.0                        | 5.6       | 12.0                  | 11.1      |
| 3S5 (n=27,34)              | 0.0                     | 0.0       | 7.4                        | 5.9       | 7.4                   | 5.9       |
| 3S6 (n=25,30)              | 0.0                     | 0.0       | 0.0                        | 0.0       | 0.0                   | 0.0       |
| 3S7 (n=22,30)              | 0.0                     | 3.3       | 4.5                        | 3.3       | 4.5                   | 6.7       |
| <u>Grade 5 Chinese</u>     |                         |           |                            |           |                       |           |
| 5C1 (n=26,30)              | 3.8                     | 3.3       | 11.5                       | 10.0      | 15.4                  | 13.3      |
| 5C2 (n=30)                 | 0.0                     | 0.0       | 13.3                       | 13.3      | 13.3                  | 13.3      |
| <u>Grade 5 Hispanic</u>    |                         |           |                            |           |                       |           |
| 5S1 (n=26,35)              | 11.5                    | 11.4      | 0.0                        | 0.0       | 11.5                  | 11.4      |
| 5S2 (n=31,33)              | 3.2                     | 9.1       | 0.0                        | 0.0       | 3.2                   | 9.1       |

<sup>a</sup> The first sample 'n' indicates the number of students who were present for the entire year. The second numeral, when it appears, indicates the number of students present in the group at any time during the school year, i.e., the total number of stable and transient students.

enormous variability within the grade X ethnicity and classroom type groups in the number of of NES and low LES students. For example, though the Chinese third grade bilingual classrooms averaged 27.8% NES and low LES students, classroom 3C1 had no stable class members of this type, and classroom 3C4 had 34.5% of its students in these categories. There was also considerable though less extreme variability within the other grade by ethnicity groups, as can be seen by examination of the percentages for each classroom in those groups.

#### 2.4.2. CTBS Achievement Data

Data were collected from the school districts on students in the seventeen target classrooms in an attempt to assess the level of academic functioning in those classrooms at the beginning of the 1981-82 school year. Students' scores on the Reading, Language Arts, and Mathematics subtests of the Comprehensive Tests of Basic Skills (CTBS) for Spring or Fall of 1981 were obtained not only for target subjects but for other class members as well. Since the administration of the CTBS is a major part of the standardized testing program conducted by the school districts, virtually all students had been tested, and their scores were readily obtainable from the districts. This fact was an important consideration since the test represented the only standardized measure on which targets and their classmates could be compared in this project.



#### 2.4.2.1. The Nature of the CTBS Test

The publisher of the CTBS, McGraw- Hill, claims that all levels of the test are designed to draw on the following five intellectual processes: recognition, translation, interpretation, application, and analysis. Each item requires that the students perform at least one of the following operations:

- recognition or recall of information;
- translation or conversion of concepts from one form of language (symbolic or verbal) to another;
- comprehension of concepts and their interrelationship;
- application of techniques, including fundamental operations;
- interpretation beyond stated information.

While the same form of the CTBS was used for all testing (Form S, published in 1973), the levels used differed according to the grade in which they were administered. Since the subtests were not identical across all levels, a brief description of the subtests by level is provided.

#### Level C.

Level C is considered appropriate for grades 1.6 to 2.9. The battery consists of three subtests in the skill areas of Reading and Language Arts and two subtests in the area of Mathematics. For each skill area a total score is obtained by adding the raw scores for the corresponding subtests.

Reading. The Reading scale is comprised of a vocabulary and two comprehension subtests. The vocabulary section is made up of 33

items, for which the examiner reads a definition, and the students are asked to select the word referred to from a group of four words printed on the page. The words defined are found in reading material at the following grade levels, as determined by the EDL Revised Core Vocabulary (Taylor et al., 1969): six words are at Grade 1, six at Grade 2, nine at Grade 3, and two at Grade 4. The distractors are drawn from antonyms as well as contextually related and unrelated words.

Reading comprehension is tested by means of the "sentences" and "passages" subtests. In the 23-item sentences test, students are asked to select the word that best completes a sentence (both semantically and syntactically). Since reading skill per se is not being measured, responses have been chosen so that the majority are readable by second graders, as determined by the EDL Revised Core Vocabulary. The following distribution of grade difficulties is reported by the publisher: 13 percent at Grade 1, 48 percent at Grade 2, 17 percent at Grade 3, with the remaining 22 percent at a fourth grade level. The passages subtest is made up of six passages from which 18 items are drawn. Students are asked to answer questions requiring literal recall, use of contextual cues, or interpretation or selection of the main idea. As with the sentences test, words in the passages are drawn predominantly from the first and second grade levels.

Language Arts. For the Language Arts scale, spelling, mechanics, and expression are tested. The spelling subtest consists of 34 words. The examiner reads the word aloud and uses it in a sentence. Students are to determine whether or not the word presented is spelled

correctly. They mark their decision by choosing the smiling face for correctly spelled words, and the frowning face for misspelled words.

The 23-item mechanics test focusses on punctuation and capitalization. The 11-item punctuation section tests the students' knowledge of the use of commas, periods, question marks, and exclamation points. Each item contains one or two sentences. At the beginning of each item one of the above punctuation marks is presented in a circle. The students are to determine if it is needed, and if so, its location. Items focussing on rules of capitalization are presented using the same format.

The 22 items of the language expression test follow the format of the sentences part of the Reading test. For each item a sentence is presented in which a word is missing. Students are asked to read the sentence and choose the word which best completes it. This test assesses the students' knowledge of standard English. The majority of distractors involve incorrect syntax or non-standard English.

Mathematics. For the Mathematics scale, only two subtests are involved. In the computations test, students are to perform ten addition, ten subtraction, and ten multiplication problems. Addition and subtraction problems are presented both vertically and horizontally with one-, two-, and three-digit numbers. Only one digit multiplication problems are given, all horizontally. Each mathematical operation is timed separately.

In the concepts and applications test the 25 items are read aloud to the students. The test measures basic operation skills (numbers,

measurement, and fractions). Students select from pictorial, numerical, or printed responses.

### Level 1.

Level 1 is appropriate for grades 2.5-4.9. While the subject areas covered by this level are identical to that of Level C, the subtests and format vary. As stated previously, for all levels the total score for each subject area is found by adding the scores on the constituent subtests.

Reading. For Level 1, the Reading section involves only a vocabulary subtest and one comprehension subtest. The vocabulary measure is based on 40 items. For each item, a phrase is presented in which one word is underlined. Students are to choose a synonym from four alternatives provided. The words selected for inclusion were based on A Revised Vocabulary: A Basic Vocabulary for Grades 1-8 (Taylor et al., 1969a).

The reading comprehension subtest measures skills in literal and critical comprehension. A majority of the 45 items, based on seven reading selections, are claimed to tap critical comprehension and to involve common emotions and experiences as well as informative material.

Language Arts. The Language Arts scale consists of the same subtests as those in Level C, i.e., spelling, mechanics, and expression. Each of the 44 spelling words are presented to the students in a sentence. The students are to read the sentence and determine if the

underlined word is spelled correctly. The students mark the appropriate space for "right" or "wrong." Each item is used to assess a specific spelling rule. Words of appropriate reading difficulty were drawn from A Revised Core Vocabulary (Taylor et al., 1969). As with Level C, the mechanics subtest examines punctuation and capitalization skills in sentences. There are ten items for each skill area. The expression test is comprised of 40 items which tap aspects of linguistic expression including: standard English, syntax, diction, and organizational skill.

Mathematics. The Level 1 Mathematics scale also involves computation, concepts, and applications, but separate scores are reported for the latter two areas. Each of the basic mathematical operations (addition, subtraction, multiplication, and division) is tested with twelve items in the computation section. The remaining 50 items are divided evenly between concepts and application questions. The concepts items assess students' ability to comprehend mathematical concepts and their interrelationships, as well as their ability to convert concepts expressed in one form (graphic, numerical, or verbal) to another. The concepts assessed include number systems, measurement, set theory, geometry, and numeration. The remaining questions are designed to assess the problem-solving abilities of the students in the areas of algebra, measurement, reasoning, and set theory.

## Level 2.

The Level 2 test is appropriate for grades 4.5-6.9. The number of the subtests and their format at this level are identical to that

of Level 1. Consequently, only the differences in the nature of the subtests at this level are noted below.

In the vocabulary part of the Reading test, words have been drawn from An Advanced Vocabulary for Grades 9-13 (Taylor et al., 1969b), as well as from A Revised Core Vocabulary: A Basic Vocabulary for Grades 1-8. In Language Arts, the number of items for the spelling subtest has been increased from 44 to 50. The expression subtest has also been increased in length by 5 items. Another aspect of effective expression-- clarity and economy of expression-- is examined at Level 2, in addition to the skills previously mentioned. The remaining changes can be found in the mathematics concepts and applications sections. While the number of items has been remained the same, the content areas have been broadened. At Level 2, the concepts section includes questions involving graphs, and the applications subtest examines students' knowledge of percentages and numeration.

#### 2.4.2.2. Descriptive Findings on the CTBS

All findings are reported in standard scale form because they allow the assessment of students' achievement regardless of the level(s) used. For the purposes of interpretation of these scale scores, comparisons are made between the means of each whole class in our study and the CTBS standardization sample.

Before proceeding with these comparisons, it is important to characterize the standardization sample. This demographic information was obtained by the test publisher in Spring 1973 from the schools

that participated in the standardization study. Data provided by schools concerned characteristics of the student population for the school, and not for the specific classrooms tested. According to the test publisher the percentage of students in the standardization sample who spoke a language other than English outside of school or came from homes in which a language other than English was spoken was 8.8%. The ethnic groups represented included: 8.5% Hispanic, 16.8% Black, and 74.1% other.

In addition to presenting means and standard deviations of the standardization sample, as a basis for comparison, stanine equivalents for each classroom mean have also been reported. The values have been included in an attempt to more clearly characterize the level of functioning for the classrooms as a whole. One is cautioned against drawing comparisons between the levels of performance of the various classes. It is important to keep in mind that the composition of the classrooms varied widely in terms of percentage of native English speakers, and NES and low LES children. For this reason, direct comparisons between classrooms have been avoided.

Reading. The CTBS reading performance of all students in each of the seventeen classrooms is presented in Table 2.11. Means and standard deviations are reported for subtests as well as total score. Data are presented for individual classrooms and for grade X ethnicity groups.

The scale score means and standard deviations for the standardization sample for Level C are as follows:



Table 2.11

Means and Standard Deviations of Spring 1981  
CTBS Reading Performance for  
Whole Class

| Grade by Ethnicity<br>and<br>Classroom | n <sup>a</sup> | <u>R VOC</u> |       | <u>R SENT</u> |       | <u>R PASS</u> |       | <u>R TOT</u> |       |
|--|----------------|--------------|-------|---------------|-------|---------------|-------|--------------|-------|
|  |                | Mean         | SD    | Mean          | SD    | Mean          | SD    | Mean         | SD    |
| Grade 3 Chinese (131)                  |                | 321.25       | 50.41 | 276.12        | 26.20 | 276.16        | 27.64 | 315.08       | 45.58 |
| 3C1                                    | (20)           | 326.50       | 43.16 | 274.85        | 19.68 | 278.45        | 22.31 | 317.55       | 34.61 |
| 3C2                                    | (16)           | 304.12       | 23.94 | 266.65        | 24.33 | 272.50        | 28.04 | 306.00       | 37.71 |
| 3C3                                    | (20)           | 300.85       | 43.37 | 269.00        | 28.44 | 267.65        | 32.55 | 296.10       | 49.09 |
| 3C4                                    | (27)           | 334.31       | 65.83 | 281.64        | 30.76 | 274.96        | 33.52 | 325.89       | 54.80 |
| 3C5                                    | (22)           | 327.09       | 44.74 | 278.14        | 23.63 | 282.18        | 18.33 | 317.91       | 36.70 |
| 3C6                                    | (26)           | 324.62       | 54.56 | 281.12        | 26.08 | 279.35        | 27.45 | 319.77       | 49.50 |
| Grade 3 Hispanic (114)                 |                | 302.29       | 48.64 | 273.04        | 26.55 | 267.94        | 31.20 | 299.27       | 46.07 |
| 3S1                                    | (17)           | 315.67       | 57.20 | 275.19        | 25.49 | 273.71        | 34.32 | 315.53       | 50.37 |
| 3S2                                    | (16)           | 288.94       | 22.22 | 271.81        | 21.36 | 265.38        | 26.24 | 292.31       | 29.63 |
| 3S3                                    | (11)           | 305.18       | 56.76 | 268.82        | 37.87 | 272.27        | 40.79 | 297.09       | 65.69 |
| 3S4                                    | (23)           | 312.91       | 49.05 | 282.87        | 17.46 | 272.26        | 25.03 | 309.26       | 33.94 |
| 3S5                                    | (27)           | 285.48       | 43.93 | 262.96        | 26.00 | 259.30        | 33.09 | 280.11       | 41.87 |
| 3S6                                    | (12)           | 313.33       | 52.13 | 272.92        | 37.14 | 266.42        | 36.00 | 306.00       | 59.85 |
| 3S6                                    | (8)            | 299.50       | 53.77 | 281.63        | 20.50 | 273.88        | 24.06 | 307.50       | 44.62 |
| <hr/>                                  |                |              |       |               |       |               |       |              |       |
|  | n <sup>a</sup> | <u>R VOC</u> |       | <u>R COMP</u> |       | <u>R TOT</u>  |       |              |       |
|  |                | Mean         | SD    | Mean          | SD    | Mean          | SD    |              |       |
| Grade 5 Chinese (37)                   |                | 392.45       | 69.22 | 443.68        | 72.71 | 414.05        | 66.53 |              |       |
| 5C1                                    | (21)           | 376.91       | 56.68 | 427.95        | 61.45 | 395.24        | 50.85 |              |       |
| 5C2                                    | (16)           | 413.81       | 80.50 | 464.31        | 82.78 | 438.75        | 77.64 |              |       |
| Grade 5 Hispanic (45)                  |                | 403.84       | 80.94 | 409.64        | 79.83 | 397.24        | 80.16 |              |       |
| 5S1                                    | (24)           | 411.71       | 99.56 | 422.38        | 97.66 | 408.54        | 99.26 |              |       |
| 5S2                                    | (21)           | 394.86       | 53.43 | 395.10        | 51.34 | 384.33        | 49.77 |              |       |

<sup>a</sup> The reported n corresponds to the number of subjects on whom the total score was calculated. In some cases, the number of subjects on whom subtest values were calculated is greater than the reported n.

| <u>Standardization</u> |             | <u>Sample: Grade 2.7</u> |
|------------------------|-------------|--------------------------|
| <u>Test</u>            | <u>Mean</u> | <u>SD</u>                |
| R Voc                  | 330         | 58.0                     |
| R Sent                 | 288         | 31.2                     |
| R Pass                 | 284         | 30.3                     |
| R Tot                  | 326         | 59.2                     |

As can be seen, the mean of only one of the 13 third grade classrooms, 3C4, was above the standardization mean for the vocabulary test. This was the only case in which any of the classes at the Grade 3 level obtained a mean score above that of the standardization sample. This classroom, 3C4, was also more variable than the comparison sample on the vocabulary test.

An examination of the levels of performance for the individual classes reported by stanines gives a more complete picture as to the levels of performance for the individual classes. These values are reported in Table 2.12. As can be seen, with the exception of 3S5 on "sentences" and "passages", all classes were functioning at an "average" level on all Reading subtests, receiving stanine scores of four, five, or six. (Stanine scores between one and three would signify below average levels of performance. Similarly, mean performance yielding stanine scores between seven and nine would be indicative of above average levels of achievement).

For Level 1, which was administered to our fifth graders in the Spring of 1981, the mean scores and standard deviations of the standardization sample are the following:

| <u>Standardization</u><br><u>Test</u> | <u>Sample:</u><br><u>Mean</u> | <u>Grade 4.7</u><br><u>SD</u> |
|---------------------------------------|-------------------------------|-------------------------------|
| R Voc                                 | 413                           | 72.8                          |
| R Comp                                | 443                           | 88.3                          |
| R Tot                                 | 422                           | 78.6                          |

In the fifth grade sample, only one classroom, 5C2, scored above the standardization sample mean. Examination of the standard deviations reveals that the two lower scoring classes, 5C1 and 5S2, were also the most homogeneous. The stanine equivalents of the fifth grade classroom means for Reading are also reported in Table 2.12. As with the third grade groups, the fifth grade classrooms are also all functioning at an average level as evidenced by their stanine scores of four or five.

Language Arts. Performance on the Language Arts measures produced some interesting results. In Table 2.13 these data are presented. The standardization sample means for Level C, administered to our third graders at the end of their second grade year, are reported below:

| <u>Standardization</u><br><u>Test</u> | <u>Sample:</u><br><u>Mean</u> | <u>Grade 2.7</u><br><u>SD</u> |
|---------------------------------------|-------------------------------|-------------------------------|
| LA Spl                                | 394                           | 61.1                          |
| LA Mech                               | 369                           | 51.7                          |
| LA Exp                                | 377                           | 75.1                          |
| LA Tot                                | 359                           | 65.9                          |

Comparisons of the classroom averages to the standardization sample means show that all thirteen third grade classes as wholes scored

Table 2.12

## Performance of Whole Class on CTBS

## Reading Reported by Stanine

| Grade by Ethnicity<br>and<br>Classroom | Stanine Equivalents |        |        |       |
|--|---------------------|--------|--------|-------|
|  | R VOC               | R SENT | R PASS | R TOT |
| <u>Grade 3 Chinese</u>                 |                     |        |        |       |
| 3C1                                    | 5                   | 4      | 4      | 5     |
| 3C2                                    | 4                   | 4      | 4      | 4     |
| 3C3                                    | 4                   | 4      | 4      | 4     |
| 3C4                                    | 5                   | 5      | 4      | 5     |
| 3C5                                    | 5                   | 4      | 5      | 5     |
| 3C6                                    | 5                   | 5      | 5      | 5     |
| <u>Grade 3 Hispanic</u>                |                     |        |        |       |
| 3S1                                    | 4                   | 4      | 4      | 4     |
| 3S2                                    | 4                   | 4      | 4      | 4     |
| 3S3                                    | 4                   | 4      | 4      | 4     |
| 3S4                                    | 4                   | 5      | 4      | 4     |
| 3S5                                    | 4                   | 3      | 3      | 4     |
| 3S6                                    | 4                   | 4      | 4      | 4     |
| 3S7                                    | 4                   | 5      | 5      | 4     |
|  | R VOC               | R COMP | R TOT  |       |
| <u>Grade 5 Chinese</u>                 |                     |        |        |       |
| 5C1                                    | 4                   | 5      | 4      |       |
| 5C2                                    | 5                   | 5      | 5      |       |
| <u>Grade 5 Hispanic</u>                |                     |        |        |       |
| 5S1                                    | 5                   | 5      | 5      |       |
| 5S2                                    | 5                   | 4      | 4      |       |

Table 2.13

Means and Standard Deviations of Spring 1981

CTBS Language Arts Performance for

Whole Class

| Grade by Ethnicity<br>and<br>Classroom |                | <u>LA SPL</u> |       | <u>LA MECH</u> |       | <u>LA EXP</u> |        | <u>LA TOT</u> |       |
|--|----------------|---------------|-------|----------------|-------|---------------|--------|---------------|-------|
|  | n <sup>a</sup> | Mean          | SD    | Mean           | SD    | Mean          | SD     | Mean          | SD    |
| Grade 3 Chinese                        | (133)          | 380.91        | 51.58 | 390.61         | 74.85 | 372.41        | 53.18  | 360.27        | 66.06 |
| 3C1                                    | (21)           | 382.10        | 38.14 | 435.62         | 53.83 | 371.52        | 42.39  | 377.38        | 52.41 |
| 3C2                                    | (17)           | 387.71        | 45.43 | 384.71         | 73.53 | 357.00        | 38.42  | 349.24        | 41.13 |
| 3C3                                    | (20)           | 383.45        | 46.57 | 377.90         | 85.43 | 349.85        | 47.80  | 348.60        | 67.88 |
| 3C4                                    | (27)           | 368.46        | 66.94 | 376.43         | 94.83 | 365.22        | 71.86  | 352.15        | 95.66 |
| 3C5                                    | (23)           | 373.87        | 52.35 | 381.52         | 51.44 | 387.04        | 30.94  | 354.83        | 41.60 |
| 3C6                                    | (25)           | 393.68        | 49.50 | 391.24         | 66.82 | 395.96        | 57.96  | 376.52        | 67.86 |
| Grade 3 Hispanic                       | (98)           | 338.29        | 52.78 | 360.63         | 78.52 | 361.24        | 56.69  | 326.61        | 67.34 |
| 3S1                                    | (17)           | 351.38        | 63.93 | 372.82         | 72.07 | 381.00        | 48.30  | 346.00        | 62.45 |
| 3S2                                    | (5)            | 330.40        | 26.74 | 318.33         | 50.55 | 346.50        | 22.98  | 298.20        | 30.60 |
| 3S3                                    | (10)           | 341.00        | 61.85 | 347.00         | 91.63 | 345.00        | 76.35  | 312.40        | 94.94 |
| 3S4                                    | (21)           | 343.82        | 47.32 | 378.41         | 65.33 | 363.33        | 39.86  | 334.86        | 40.57 |
| 3S5                                    | (25)           | 326.63        | 44.43 | 342.04         | 87.44 | 348.52        | 56.98  | 312.88        | 65.02 |
| 3S6                                    | (12)           | 337.92        | 64.23 | 381.00         | 90.58 | 377.33        | 73.76  | 338.67        | 98.29 |
| 3S7                                    | (8)            | 330.13        | 50.86 | 366.75         | 71.62 | 360.75        | 70.85  | 324.13        | 67.24 |
| Grade 5 Chinese                        | (38)           | 467.24        | 65.15 | 460.47         | 91.10 | 441.24        | 70.55  | 441.40        | 72.73 |
| 5C1                                    | (22)           | 468.46        | 50.76 | 455.14         | 93.50 | 426.36        | 60.14  | 435.14        | 56.62 |
| 5C2                                    | (16)           | 465.56        | 82.81 | 467.81         | 90.18 | 461.69        | 80.27  | 450.00        | 91.77 |
| Grade 5 Hispanic                       | (43)           | 420.14        | 72.57 | 422.98         | 72.30 | 430.27        | 87.57  | 406.44        | 73.08 |
| 5S1                                    | (24)           | 414.88        | 67.55 | 428.38         | 80.49 | 451.21        | 103.34 | 414.29        | 85.60 |
| 5S2                                    | (19)           | 526.45        | 79.50 | 416.16         | 61.90 | 405.15        | 56.68  | 396.53        | 53.99 |

<sup>a</sup> The reported n corresponds to the number of subjects on whom the total score was calculated. In some cases, the number of subjects on whom subtest values were calculated is greater than the reported n.

Table 2.14

## Performance of Classrooms on CTBS

## Language Arts Reported by Stanine

| Grade by Ethnicity<br>and<br>Classroom | Stanine Equivalents |         |        |        |
|--|---------------------|---------|--------|--------|
|  | LA SPL              | LA MECH | LA EXP | LA TOT |
| <u>Grade 3 Chinese</u>                 |                     |         |        |        |
| 3C1                                    | 6                   | 7       | 4      | 6      |
| 3C2                                    | 6                   | 5       | 4      | 5      |
| 3C3                                    | 6                   | 5       | 4      | 5      |
| 3C4                                    | 5                   | 5       | 4      | 5      |
| 3C5                                    | 5                   | 5       | 5      | 5      |
| 3C6                                    | 6                   | 5       | 5      | 6      |
| <u>Grade 3 Hispanic</u>                |                     |         |        |        |
| 3S1                                    | 4                   | 5       | 5      | 5      |
| 3S2                                    | 4                   | 3       | 3      | 3      |
| 3S3                                    | 4                   | 4       | 3      | 4      |
| 3S4                                    | 4                   | 5       | 4      | 4      |
| 3S5                                    | 3                   | 4       | 4      | 4      |
| 3S6                                    | 4                   | 5       | 4      | 4      |
| 3S7                                    | 4                   | 5       | 4      | 4      |
|  | LA SPL              | LA MECH | LA EXP | LA TOT |
| <u>Grade 5 Chinese</u>                 |                     |         |        |        |
| 5C1                                    | 6                   | 5       | 4      | 5      |
| 5C2                                    | 6                   | 5       | 5      | 5      |
| <u>Grade 5 Hispanic</u>                |                     |         |        |        |
| 5S1                                    | 4                   | 4       | 5      | 4      |
| 5S2                                    | 5                   | 4       | 3      | 4      |

below the mean for spelling, yet all six of the Chinese and three of the Hispanic classrooms scored above the mean on the mechanics test. Only the Chinese all-English classes (3C5 and 3C6) were above the mean on the expressions test. Two of the Hispanic classes were also found to perform at or above the standardization mean on the expressions test. Since the subtests are combined to form total score, it is not surprising to find that only three classes, all of them Chinese, performed above the comparison sample mean for the total Language Arts scale.

The stanine equivalents for the Language Arts measures are reported in Table 2.14. These values suggest that all of the third grade Chinese classrooms were functioning at an average level, for their stanine scores were between four and six. One class, 3C1, obtained a stanine score of seven on the mechanics subtest. For the third grade Hispanic classrooms, the stanines were predominantly four or five. Two Hispanic classes yielded stanines of three. Performance for 3S3 resulted in a stanine score of 3 on the expressions subtest while 3S2 performed at the third stanine level on mechanics, expression, and total score.

The variability within the classrooms is markedly similar as evidenced by the reported standard deviations. Four classrooms do not follow this pattern. 3S2 exhibits much less variability, but this is most probably due to the size of the sample for this class. The remaining three classes, 3C4, 3S3, and 3S6, are more variable when compared to the others. As mentioned previously, such differences may be due to the differences in composition of these classes.



The means for the standardization sample for Level 1 are given below. As can be seen, by comparing the performance of the fifth grade classes as reported in Table 2.13 to that of the standardization sample, 5C2 was the only class which as a group performed at that level on the total Language Arts test, and this class was below the mean on the expressions subtest. While 5C1 did score above the mean on the spelling subtest, it was below the mean for mechanics and expression. Neither of the Hispanic fifth grade classes scored at or above the standardization mean on any of the language measures. The means and standard deviations for the standardization sample are as follows:

Standardization Sample: Grade 4.7

| <u>Test</u> | <u>Mean</u> | <u>SD</u> |
|-------------|-------------|-----------|
| LA Spl      | 440         | 70.2      |
| LA Mech     | 461         | 88.2      |
| LA Exp      | 470         | 76.7      |
| LA Tot      | 440         | 76.7      |

The stanine scores, as reported in Table 2.14, show that although the classes were performing below the mean of the standardization sample, they were performing at levels which would be regarded as average for their grade. Only one class, 5S2, failed to fall within this "average" range for all subtests. The mean score for this class on the expressions subtest was equivalent to a stanine score of three.

Mathematics. The present discussion of CTBS achievement of the classrooms taken as wholes concludes with a discussion of performance on the CTBS Mathematics measures. Again for comparative purposes, the means and standard deviations of the standardization sample are given

below.

Standardization Sample: Grade 2.7

| <u>Test</u> | <u>Mean</u> | <u>SD</u> |
|-------------|-------------|-----------|
| M Comp      | 305         | 36.9      |
| M Con&App   | 255         | 27.8      |
| M Tot       | 308         | 42.4      |

The means and standard deviations for each of the seventeen classrooms is reported in Table 2.15. All of the Chinese third grade classes averaged well above the mean of the standardization sample on the subtests and the total score. Among the Hispanic classes, only 3S1 and 3S4 scored above the standardization mean on the computations test. 3S1, 3S2, and 3S6 scored above the mean for the concepts and applications test, and the remaining class averages were within six points of the standardization mean. 3S1, 3S4, and 3S6 had total scores which exceeded the standardization sample mean. The remaining classes were within 15 points of the total mean value.

The stanines, as reported in Table 2.16, are particularly useful for characterizing the level of performance for the classes on the Mathematics measures. The Chinese sample included classes where performance on the math measures could be considered above average for this grade level. Four of the six Chinese classrooms had stanine scores of seven. Two of these classes, 3C3 and 3C4 obtained stanine averages of seven for total score. In the Hispanic sample, all of the classes were performing at levels which could be considered average since they all obtained stanine scores of five or six.

Table 2. 15

Means and Standard Deviations of Spring 1981  
CTBS Math Performance for  
Whole Class

| Grade by Ethnicity<br>and<br>Classroom | n <sup>a</sup> | M COMP |       | M CON & APP |       | M TOT  |       | Mean   | SD    |
|--|----------------|--------|-------|-------------|-------|--------|-------|--------|-------|
|  |                | Mean   | SD    | Mean        | SD    | Mean   | SD    |        |       |
| Grade 3 Chinese                        | (134)          | 338.18 | 31.83 | 269.32      | 25.80 | 340.49 | 34.73 |        |       |
| 3C1                                    | (21)           | 343.67 | 37.33 | 269.00      | 30.94 | 340.10 | 38.38 |        |       |
| 3C2                                    | (17)           | 324.77 | 39.65 | 270.77      | 24.60 | 333.65 | 43.54 |        |       |
| 3C3                                    | (20)           | 343.50 | 21.15 | 273.40      | 22.74 | 347.70 | 27.04 |        |       |
| 3C4                                    | (28)           | 346.11 | 18.86 | 269.96      | 25.57 | 346.00 | 26.22 |        |       |
| 3C5                                    | (22)           | 325.30 | 37.23 | 265.09      | 28.40 | 330.77 | 39.76 |        |       |
| 3C6                                    | (26)           | 341.27 | 31.02 | 268.39      | 24.06 | 342.00 | 34.75 |        |       |
| Grade 3 Hispanic                       | (115)          | 306.34 | 32.10 | 255.98      | 24.79 | 308.95 | 35.38 |        |       |
| 3S1                                    | (20)           | 319.75 | 26.91 | 260.00      | 20.17 | 321.90 | 26.80 |        |       |
| 3S2                                    | (16)           | 302.38 | 22.10 | 256.94      | 19.41 | 306.50 | 25.06 |        |       |
| 3S3                                    | (11)           | 303.91 | 41.08 | 251.82      | 27.86 | 305.46 | 44.11 |        |       |
| 3S4                                    | (22)           | 316.96 | 32.23 | 254.23      | 25.35 | 316.00 | 36.46 |        |       |
| 3S5                                    | (26)           | 296.22 | 32.96 | 251.19      | 23.29 | 300.77 | 35.16 |        |       |
| 3S6                                    | (12)           | 302.83 | 28.84 | 270.00      | 33.47 | 308.00 | 45.72 |        |       |
| 3S7                                    | (8)            | 294.25 | 39.39 | 249.13      | 28.24 | 294.88 | 38.39 |        |       |
|  | n <sup>a</sup> | M COMP |       | M CON       |       | M APP  |       | M TOT  |       |
|  |                | Mean   | SD    | Mean        | SD    | Mean   | SD    | Mean   | SD    |
| Grade 5 Chinese                        | (38)           | 419.24 | 30.77 | 432.90      | 63.61 | 422.71 | 72.86 | 413.50 | 42.75 |
| 5C1                                    | (22)           | 417.84 | 31.84 | 432.27      | 54.71 | 406.96 | 64.72 | 405.05 | 32.49 |
| 5C2                                    | (16)           | 421.19 | 30.15 | 433.75      | 76.09 | 444.38 | 79.49 | 425.13 | 52.73 |
| Grade 5 Hispanic                       | (43)           | 411.79 | 50.00 | 392.80      | 56.88 | 381.46 | 53.83 | 398.47 | 52.72 |
| 5S1                                    | (24)           | 412.54 | 56.89 | 370.31      | 60.42 | 364.00 | 57.13 | 400.46 | 63.29 |
| 5S2                                    | (19)           | 410.84 | 41.20 | 411.74      | 47.35 | 396.16 | 47.47 | 395.95 | 36.81 |

<sup>a</sup> The reported n corresponds to the number of subjects on whom the total score was calculated. In some cases, the number of subjects on whom subtest values were calculated is greater than the reported n.

Table 2.16

## Performance of Classrooms on CTBS

## Mathematics Reported by Stanine

Grade by Ethnicity  
and  
Classroom

M COMP

M CON &amp; APP

M TOT

Grade 3 Chinese

|     |   |   |   |
|-----|---|---|---|
| 3C1 | 7 | 6 | 6 |
| 3C2 | 6 | 6 | 6 |
| 3C3 | 7 | 6 | 7 |
| 3C4 | 7 | 6 | 7 |
| 3C5 | 6 | 6 | 6 |
| 3C6 | 7 | 6 | 6 |

Grade 3 Hispanic

|     |   |   |   |
|-----|---|---|---|
| 3S1 | 6 | 5 | 6 |
| 3S2 | 5 | 5 | 5 |
| 3S3 | 5 | 5 | 5 |
| 3S4 | 6 | 5 | 5 |
| 3S5 | 5 | 5 | 5 |
| 3S6 | 5 | 6 | 5 |
| 3S7 | 5 | 5 | 5 |

M COMP

M CONC

M APP

M TOT

Grade 5 Chinese

|     |   |   |   |   |
|-----|---|---|---|---|
| 5C1 | 6 | 5 | 5 | 5 |
| 5C2 | 6 | 5 | 6 | 6 |

Grade 5 Hispanic

|     |   |   |   |   |
|-----|---|---|---|---|
| 5S1 | 6 | 4 | 4 | 5 |
| 5S2 | 6 | 5 | 5 | 5 |

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The performance of the fifth grade classrooms on the CTBS math tests is also reported in Table 2.15. The values reported for 5S1 require some explanation. As the footnote explains, the reported "n" corresponds to the number of students for whom the total score was calculated. For eight of the students in the 5S1 class, scores were not available for either the concepts or the applications subtest. The scores of these eight students were included however in the calculation of the means for the computation subtest as well as for total score. This fact explains why 5S2 has a reported total score mean lower than that of 5S1 even though the subtest means for 5S2 exceeded those of 5S1 on the concepts and applications subtests.

All Grade 5 classes performed better than the standardization sample on the computations subtest. The two Chinese classes were above the mean for both the concepts subtest and math total, and 5C2 had a average mean on the applications test which exceeded the standardization mean. The means and standard deviations of the standardization sample are as follows:

| <u>Standardization Sample: Grade 4.7</u> |             |           |
|--|-------------|-----------|
| <u>Test</u>                              | <u>Mean</u> | <u>SD</u> |
| M Comp                                   | 390         | 49.0      |
| M Con                                    | 415         | 73.0      |
| M App                                    | 414         | 77.6      |
| M Tot                                    | 394         | 59.1      |

As the stanine equivalents of the mean scores (reported in Table 2.16) suggest, all of the fifth grade classes were functioning at an average level (with stanine values between four and six). In fact,

only 5S1 had any stanine scores below five. The three other fifth grade classes had average stanine scores on all math tests of five or six.

In summary, these data suggest that overall the classrooms included in this study were functioning at an average level. Few classes had mean stanine scores of three or lower, which would have suggested a below average performance. Likewise, few of the classes had average stanine scores of seven or above which would have suggested above average performance.

#### 2.5. Characterization of the Target Subject Sample

In selecting the target subjects for detailed study during the data collection year, we wanted to find classrooms with approximately ten children whose first language was either Cantonese or Spanish and who had had minimum exposure to English before coming to school. Because of this latter goal, wherever possible, we selected foreign-born as opposed to U.S.-born children. In addition, we looked for students in bilingual or all-English classrooms who had experienced enough exposure to English in school (two to three years) to make it possible for them to use English as the language of instruction, at least to some extent, during the year in which we would monitor their progress. Fourth, we tried to find children who had been placed consistently in either bilingual or all-English classrooms. Finally, parents of children selected on these grounds had to agree to allow us to study their children, to observe and test them periodically during the school year. In order to obtain enough subjects for study in some

of the classrooms we had decided to study, departures had to be made from these selection goals. In general the selection criteria were relaxed more for the fifth grade than for the third grade sample, since the data at this grade level was seen more as an in-depth case study comparison of one bilingual and one all-English class in each language, rather than as a parallel to the method comparison being done at the third grade level.

Because of classroom rearrangement by schools after the beginning of the year and because of subject attrition during the course of the school year, the number of subjects in participating classrooms varied. Table 2.17 displays the distribution of the 157 target subjects remaining in participating classrooms at the end of the year, their mean age and age range, and the relative numbers of male and female subjects. Table 2.17 also summarizes these statistics for the four grade X ethnicity groups and for the grades and the sample as a whole.

As mentioned above, wherever possible, foreign-born children rather than U.S.-born children were selected as target subjects. This selection rule was based on the assumption that overall children not born in this country would have less exposure to English and American culture before starting school than children born in the U.S. Table 2.18 summarizes data concerning place of birth of target subjects in each of the classrooms and in the grade X ethnicity groups in our study. Since it is possible that among the foreign born some places of birth would afford more early exposure to English and western culture than others, a breakdown of exact place of birth among the foreign

Table 2.17

Distribution of Subjects in Final Target Sample  
by Classroom and Grade by Ethnicity Grouping

| Grade by Ethnicity<br>and<br>Classroom | Total<br>Number | Total<br>Females | Total<br>Males | Ages as of September 1981 |              |
|--|-----------------|------------------|----------------|---------------------------|--------------|
|  |                 |                  |                | Mean                      | Range        |
| Grade 3 Chinese                        | 60              | 26               | 34             | 8.47                      | 7-9 to 10-1  |
| 3C1                                    | 12              | 3                | 9              | 8.40                      | 7-11 to 9-5  |
| 3C2                                    | 9               | 3                | 6              | 9.31                      | 7-9 to 10-1  |
| 3C3                                    | 8               | 4                | 4              | 8.23                      | 7-9 to 8-9   |
| 3C4                                    | 10              | 3                | 7              | 8.31                      | 8-0 to 9-0   |
| 3C5                                    | 11              | 8                | 3              | 8.42                      | 7-9 to 9-5   |
| 3C6                                    | 10              | 5                | 5              | 8.19                      | 7-10 to 8-8  |
| Grade 3 Hispanic                       | 57              | 26               | 31             | 8.60                      | 7-3 to 10-6  |
| 3S1                                    | 10              | 3                | 7              | 8.53                      | 7-11 to 9-7  |
| 3S2                                    | 11              | 8                | 3              | 8.30                      | 7-9 to 9-8   |
| 3S3                                    | 5               | 2                | 3              | 8.83                      | 8-6 to 9-3   |
| 3S4                                    | 12              | 5                | 7              | 8.87                      | 8-1 to 10-5  |
| 3S5                                    | 8               | 4                | 4              | 8.66                      | 7-10 to 10-6 |
| 3S6                                    | 4               | 1                | 3              | 8.85                      | 7-10 to 9-6  |
| 3S7                                    | 7               | 3                | 4              | 8.30                      | 7-3 to 9-1   |
| Grade 5 Chinese                        | 19              | 8                | 11             | 10.46                     | 9-10 to 12-0 |
| 5C1                                    | 11              | 4                | 7              | 10.62                     | 9-11 to 12-0 |
| 5C2                                    | 8               | 4                | 4              | 10.25                     | 9-10 to 10-0 |
| Grade 5 Hispanic                       | 21              | 9                | 12             | 11.28                     | 9-4 to 13-0  |
| 5S1                                    | 10              | 6                | 4              | 11.15                     | 9-4 to 12-5  |
| 5S2                                    | 11              | 3                | 8              | 11.39                     | 9-10 to 13-0 |
| Total 3rd                              | 117             | 52               | 65             |                           |              |
| Total 5th                              | 40              | 17               | 23             |                           |              |
| Total All                              | 157             | 69               | 88             |                           |              |



Table 2.18

Distribution of Target Subjects According  
to Place of Birth

| Grade by Ethnicity<br>and<br>Classroom | (N)  | U.S.         | Mexico       | Puerto Rico | Unclass.   | China        | Hong Kong    | Vietnam      | Burma      |
|--|------|--------------|--------------|-------------|------------|--------------|--------------|--------------|------------|
| <u>Grade 3 Chinese</u>                 | (60) | 13<br>(21.7) |              |             |            | 14<br>(23.3) | 18<br>(30.0) | 14<br>(23.3) | 1<br>(1.7) |
| 3C1                                    | (12) | 2            |              |             |            | 3            | 4            | 3            |            |
| 3C2                                    | (9)  | -            |              |             |            | 1            | -            | 7            | 1          |
| 3C3                                    | (8)  | -            |              |             |            | 5            | 2            | 1            |            |
| 3C4                                    | (10) | 3            |              |             |            | 2            | 5            | -            |            |
| 3C5                                    | (11) | 5            |              |             |            | 2            | 3            | 1            |            |
| 3C6                                    | (10) | 3            |              |             |            | 1            | 4            | 2            |            |
| <u>Grade 3 Hispanic</u>                | (57) | 25<br>(43.9) |              |             | 1<br>(1.8) |              |              |              |            |
| 3S1                                    | (10) | 4            |              |             |            |              |              |              |            |
| 3S2                                    | (11) | 7            |              |             | 1          |              |              |              |            |
| 3S3                                    | (5)  | 2            |              |             |            |              |              |              |            |
| 3S4                                    | (12) | 4            |              |             |            |              |              |              |            |
| 3S5                                    | (8)  | 4            |              |             |            |              |              |              |            |
| 3S6                                    | (4)  | 1            |              |             |            |              |              |              |            |
| 3S7                                    | (7)  | 3            |              |             |            |              |              |              |            |
| <u>Grade 5 Chinese</u>                 | (19) | 3<br>(15.8)  |              |             |            | -            | 10<br>(52.6) | 6<br>(31.6)  |            |
| 5C1                                    | (11) | -            |              |             |            | -            | 6            | 5            |            |
| 5C2                                    | (8)  | 3            |              |             |            | -            | 4            | 1            |            |
| <u>Grade 5 Hispanic</u>                | (21) | 3<br>(14.3)  | 16<br>(76.2) | 2<br>(9.5)  |            |              |              |              |            |
| 5S1                                    | (10) | -            | 10           | -           |            |              |              |              |            |
| 5S2                                    | (11) | 3            | 6            | 2           |            |              |              |              |            |

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born has been included.

Though one goal was to find children with two to three years of exposure to English in the school, this was not always possible. A decision was made, for example, not to eliminate from the study children who had been retained in earlier grades for various reasons. In the fifth grade classes, especially, it was difficult to find enough children meeting this criterion of two to three years of school experience. Thus the target fifth grade students in general had more exposure to English in the school environment than did the third graders. In addition there was more variability on this dimension at the fifth grade than at the third grade. In one case, a fifth grade subject who was essentially a non-English speaker was included for study, since the number of students who fit the ideal criteria were so few in that classroom. Table 2.19 displays data on the mean years and range of school experience for subjects in the various classrooms and in the grade X ethnicity groups. This table also contains the mean years and range of type of school experience for the children in target classrooms. As can be seen from this data, in order to obtain a large enough sample for the study, it was necessary once again to depart somewhat from the goal of finding children with consistent school backgrounds in either bilingual or all-English classrooms. In making such departures, less weight was given to the type of kindergarten class children had been placed in than was given to the type of first and second grade class they experienced.

Table 2.19

Amount and Type of Education in American Schools  
for Target Subjects

| Grade by Ethnicity<br>and<br>Classroom | (N)              | Total Number of<br>Years in School |       | Years in<br>Bilingual Class |       | Years in<br>All-English Class |       |
|--|------------------|------------------------------------|-------|-----------------------------|-------|-------------------------------|-------|
|  |                  | Mean                               | Range | Mean                        | Range | Mean                          | Range |
| Grade 3 Chinese                        | 60               | 2.4                                | 1-4   |                             |       |                               |       |
| 3C1                                    | (12)             | 2.5                                | 2-3   | 2.5                         | 2-3   | -                             | -     |
| 3C2                                    | (9)              | 1.7                                | 1-2.5 | 1.7                         | 1-2.5 | -                             | -     |
| 3C3                                    | (8)              | 2.0                                | 1.3-3 | 1.7                         | 1.3-3 | 0.3                           | 0-2   |
| 3C4                                    | (10)             | 3.0                                | 2-4   | 3.0                         | 2-4   | -                             | -     |
| 3C5                                    | (11)             | 2.5                                | 1-3   | 0.3                         | 0-1   | 2.2                           | 1-3   |
| 3C6                                    | (10)             | 2.3                                | 1-3   | 0.1                         | 0-1   | 2.2                           | 1-3   |
| Grade 3 Hispanic                       | 56               | 2.8                                | 1-4   | 2.7                         |       |                               |       |
| 3S1                                    | (10)             | 2.9                                | 2-3   | 2.7                         | 1.5-3 | 0.3                           | 0-1.5 |
| 3S2                                    | (11)             | 3.1                                | 2-4   | 3.1                         | 2-4   | -                             | -     |
| 3S3                                    | (5)              | 2.5                                | 1.5-4 | 2.5                         | 1.5-4 | -                             | -     |
| 3S4                                    | (12)             | 3.0                                | 2-4   | 2.8                         | 2-3   | 0.2                           | 0-1   |
| 3S5                                    | (8)              | 2.5                                | 1-3   | -                           | -     | 2.5                           | 1-3   |
| 3S6                                    | (4)              | 3.25                               | 3-4   | 0.8                         | 0-3   | 2.5                           | 0-4   |
| 3S7                                    | (6) <sup>a</sup> | 2.3                                | 1-3   | 0.2                         | 0-1   | 2.2                           | 0-3   |
| Grade 5 Chinese                        | 19               | 3.9                                | 1-5   |                             |       |                               |       |
| 5C1                                    | (11)             | 4.0                                | 2-5   | 4.0                         | 2-5   | -                             | -     |
| 5C2                                    | (8)              | 3.8                                | 1-5   | 0.3                         | 0-1   | 3.5                           | 1-5   |
| Grade 5 Hispanic                       | 21               | 3.6                                | 0-6   |                             |       |                               |       |
| 5S1                                    | (10)             | 3.9                                | 0-6   | 2.4                         | 0-4   | 1.7                           | 0-4   |
| 5S2                                    | (11)             | 3.3                                | 2-5   | 0.6                         | 0-2   | 2.6                           | 1-5   |

<sup>a</sup> Background information not available in school records for one subject in this class but will be available when parent interview information is coded.

## 2.6. Non-English-Speaking Subject Sample

In the modification of the design of this study, one change that was made to the work undertaken during the 1981-82 school year was to add a second category of subjects to those already described that were being studied in the third and the fifth grade classes. This group consisted of students in each of the selected classes who began the study year (September, 1981) or came into a classroom being studied during the year with little or no English at all, or those who had been in the school program only part of a year prior to Fall, 1981. Thus the criteria for inclusion in our NES sample were: current enrollment in existing classrooms, first language consisting of Spanish or Cantonese, little or no exposure to English prior to September 1981, and less than a year in a bilingual or all-English classroom.

As Table 2.20 indicates, the 22 NES students were unevenly divided among the existing classrooms being studied. There were more than twice as many Chinese NES subjects as Hispanic NES subjects at the third grade (12 versus 5), but there were more Hispanic NES than Chinese NES subjects at the fifth grade (4 versus 1). Seventeen of the twenty-two NES subjects were in bilingual classrooms, and 14 out of this 17 were in bilingual third grade classrooms. This table also indicates how evenly divided this NES sample was in terms of the relative numbers of boys and girls it contained. The mean age and age range of these subjects have not been included, since this information was not available for most of the students at the time of data collection.

Table 2.20

Distribution of NES Subjects by Classroom  
and Grade by Ethnicity

| Grade by Ethnicity,<br>Classroom Type,<br>and Classroom | Total n | Number of<br>Females | Number of<br>Males |
|---|---------|----------------------|--------------------|
| Grade 3 Chinese   | 12      | 6                    | 6                  |
| Bilingual   | 9       | 4                    | 5                  |
| All-English   | 3       | 2                    | 1                  |
| 3C1   | 0       | 0                    | 0                  |
| 3C2   | 5       | 2                    | 3                  |
| 3C3   | 2       | 1                    | 1                  |
| 3C4   | 2       | 1                    | 1                  |
| 3C5   | 3       | 2                    | 1                  |
| 3C6   | 0       | 0                    | 0                  |
| Grade 3 Hispanic  | 5       | 3                    | 2                  |
| Bilingual   | 5       | 3                    | 2                  |
| All-English   | 0       | 0                    | 0                  |
| 3S1   | 1       | 1                    | 0                  |
| 3S2   | 0       | 0                    | 0                  |
| 3S3   | 2       | 1                    | 1                  |
| 3S4   | 2       | 1                    | 1                  |
| 3S5   | 0       | 0                    | 0                  |
| 3S6   | 0       | 0                    | 0                  |
| 3S7   | 0       | 0                    | 0                  |
| Grade 5 Chinese   | 1       | 0                    | 1                  |
| Bilingual:5C1   | 1       | 0                    | 1                  |
| All-English:5C2   | 0       | 0                    | 0                  |
| Grade 5 Hispanic  | 4       | 2                    | 2                  |
| Bilingual:5S1   | 2       | 1                    | 1                  |
| All-English:5S2   | 2       | 1                    | 1                  |

## CHAPTER 3

### TEACHERS AND INSTRUCTIONAL PRACTICES:

#### THE INDEPENDENT VARIABLES

This chapter consists of two major parts. In the first (Section 3.1), we describe the teachers and the classroom programs involved in the study according to three general domains. These domains are:

- (1) Characteristics of the teachers: their language background, experience, and the support systems that were available to them (Section 3.1.1).
- (2) The organizational structure of instructional activities in their classes, and how much time each teacher devoted to different types of activities each day (Section 3.1.2).
- (3) The teacher's use of language for instructional purposes; e.g., the use of English in class, rather than the students' L1; the functions served by each language, and the extent to which teachers kept the two languages separate rather than translating (Section 3.1.3).

In the second part (Section 3.2) the instructional practices that we selected for examination as independent variables, and the methods we followed in assessing aspects of those practices are discussed.

### 3.1. Teachers and Classrooms

#### 3.1.1. Teacher Characteristics

Altogether, a total of twenty teachers were involved in the study during the year of data collection, although only nineteen can be counted as full participants. The teacher of one of our fifth grade classes (for Spanish speakers) was given a different teaching assignment two and a half months after the beginning of the school year; we were able to continue studying the class through the school year after the replacement teacher agreed to participate in the study. The 19 teachers ranged in age from the mid-twenties to the mid-fifties, the majority of them in their thirties and forties. Most of them had had several years of teaching experience in their current schools, although the one that replaced the teacher after two and a half months was a first year teacher. In all, these teachers covered 19 classes, although only 17 of these were actually involved in the study. 9 of the 17 classes served Spanish speaking students, the 10 others served Cantonese students. It will be recalled from the site descriptions in Chapter 2 that two of the Cantonese classes were team-taught. In both cases, one Cantonese bilingual teacher and one English-speaking monolingual teacher team-taught two bilingual classes. Only one in each pair of classes participated in the study. In each case, the English monolingual teacher handled the English reading and language arts portion of the curriculum, and the bilingual teacher managed mathematics, social studies, science and whatever L1 instruction that was provide for the students. In one, the students changed teachers midday, and

in the other, they alternated between teachers by days.

In general, the teachers in the classes that were designated as "bilingual" by the schools were bilingual (the exception being the two English monolingual teachers who were teamed with the bilingual teachers in the just mentioned Cantonese bilingual program. Table 3.1 will remind the reader of the designation of the 17 classes:

### 3.1.1.1. Background of Teachers

These bilingual teachers varied in their L1 proficiency (from what we could determine by observation), and in the extent to which

Table 3.1

#### Language Backgrounds of the 19 Teachers in the Study

| Class | Group    | Grade | Designation | Teacher(s)     | Language                    |
|-------|----------|-------|-------------|----------------|-----------------------------|
| 3C1   | Chinese  | 3     | Bilingual   | TC1A &<br>TC1B | English<br>Bilingual (E=L2) |
| 3C2   | Chinese  | 3     | Bilingual   | TC2            | Bilingual (C=L2)            |
| 3C3   | Chinese  | 3     | Bilingual   | TC3A &<br>TC3B | English<br>Bilingual (E=L2) |
| 3C4   | Chinese  | 3     | Bilingual   | TC4            | Bilingual (E=L2)            |
| 3C5   | Chinese  | 3     | All-English | TC5            | English                     |
| 3C6   | Chinese  | 3     | All-English | TC6            | Bilingual (E=L2)            |
| 3S1   | Hispanic | 3     | Bilingual   | TS1            | Bilingual (E=L2)            |
| 3S2   | Hispanic | 3     | Bilingual   | TS2            | Bilingual (S=L2)            |
| 3S3   | Hispanic | 3     | Bilingual   | TS3            | Bilingual (E=L2)            |
| 3S4   | Hispanic | 3     | Bilingual   | TS4            | Bilingual (S=L2)            |
| 3S5   | Hispanic | 3     | All-English | TS5            | English                     |
| 3S6   | Hispanic | 3     | All-English | TS6            | English                     |
| 3S7   | Hispanic | 3     | All-English | TS7            | English                     |
| 5C1   | Chinese  | 5     | Bilingual   | TC7            | Bilingual (E=L2)            |
| 5C2   | Chinese  | 5     | All-English | TC8            | English                     |
| 5S1   | Hispanic | 5     | Bilingual   | TS8            | Bilingual (S=L2)            |
| 5S2   | Hispanic | 5     | All-English | TS9            | English                     |



they used the L1 in their teaching. As Table 3.1 shows, all of the classes that had been designated as bilingual had bilingual teachers. All but one of the Cantonese bilingual teachers were native speakers; the one who was not (TC2) had grown up in a home in which Cantonese was spoken, but he did not learn it until later in life. This teacher's command of Cantonese was adequate for social interaction, but it was not so for teaching. In fact he rarely did use Cantonese in class except when he was working with individually with non-English speaking students. Only two of the Spanish bilingual teachers (TS1 and TS3) were native speakers of Spanish. The other three had learned Spanish as a second language largely through formal study. Two of them (TS2 and TS8), however, were as proficient and fluent as native-speakers in Spanish since they had lived in Spanish-speaking countries. The third (TS4) was far less proficient, but was able to communicate more or less adequately in Spanish.

#### 3.1.1.2. Teachers' Proficiency in English

The English language skills of the teachers varied both between native and non-native English speakers, and within the two groups. Although neither the teachers' English skills nor their L1 skills were not formally assessed, differences in comprehensibility and grammatical correctness were noted by members of the research team who had the opportunity to visit the classes. Objective ratings of the teachers' language skills were done on the basis of audio and video tapes that were collected in classrooms. On the whole, most of the teachers were fully competent in their English skills. All but one of the bilingual teachers were more proficient in English than in the other language,

and that teacher was completely fluent in English if not altogether "grammatical" in her usages. All but one of the teachers for the all-English classes were native speakers of English, the one who was not a native-speaker (TC6) was nevertheless completely proficient in its use, although her pronunciation of English was not altogether native-like.

#### 3.1.1.3. Support Services for Teachers

Conditions varied somewhat as to the availability of aides and other in-class support services. All of the teachers had the help of at least one instructional aide, but the amount of time they could count on such help varied widely. Several teachers had aides in the classroom for only one hour each day. At the other extreme was one teacher who had as many as 4 additional persons helping in the classroom several times a week. This fifth grade teacher had the help of a bilingual aide to tutor the NES and LES students in her classroom for two and a half hours each day, a Title 1 aide that tutored in math and social studies one and a half hour each day, a student teacher who worked in the class for 10 hours per week, a college student intern (pre-teacher training) three hours each week, and math and reading labs for her students for thirty minutes each of four days during the week. In contrast, another fifth grade teacher at a different school had one aide who worked with the three non-English speaking Laotian students in her class for just three hours each week, and virtually no other assistants. Differences such as this not only affected the efficiency of the teachers, they also affected the amount of contact that the LEP students had with adult English-speakers who could

provide them with exposure to the language to be learned.

Several teachers had interns (teacher trainees) in their classrooms during the study year, and these trainees provided some help while they were there. On the average, however, teachers could count on about 3 hours of teaching assistance each day. Only a few teachers had full-time aides. Typically, the aide was a bilingual (although not always in the "right" language), where the teacher was not, and in most cases, these aides were assigned to work with the students in the class who knew the least English. The assignment of aides to classes was sometimes done in strange and mysterious ways: in one school the aide for a Spanish bilingual class was a Tagalog-English bilingual. She could provide neither native-language support to the Spanish speakers in the class, nor could she provide useful English support for them since her English was heavily influenced by Tagalog and was therefore not a suitable model for the students to base their learning of English on. In some of the English-only classes serving students from a variety of language backgrounds, the aides seldom knew more than one of the L1's spoken by the NES and LES students. As a consequence, only a few students received any native language support in such classes.

On the whole, the aides tutored the students in their native language when it was possible, and in English when it was not. The role of the instructional aides varied considerably across classes. In some classes, the aides functioned as auxiliary teachers, and regularly offered group instruction in a variety of subjects. In a couple of classes, the aides did the bulk of the L1 teaching: they provided

whatever L1 reading and writing instruction the students were given. In both cases, the aides were fully qualified teachers (they had been teachers in their home countries before coming to the U. S.). In two other classes, the teachers turned over the responsibility for working with the least English proficient students to their aides entirely, and the teachers themselves rarely interacted with them. In some classes, the aides were regarded strictly as "helpers": they graded papers, made dittoed copies of worksheets for the teacher, prepared materials for instructional activities, and cleaned up after them. These aides had no role at all in working with the students. (For further discussion of the role of aides, see Chapter 5, which reports on the NES substudy.)

#### 3.1.1.4. ESL and Other Pullout Services

In addition to the aides that worked in the study classrooms, all of the teachers enjoyed additional outside support services. In one school from which 3 of the 17 classes were drawn, math and reading labs were available for students to attend for special help. Many of the students in our target classes took advantage of these labs which were designed to provide whatever help was needed in those subjects, including help with the language. There were also an hour-long library period each week in most of the schools, wherein the whole class visited the school library, and either were provided with some sort of specially guided literary experience by the librarian, or were given opportunities to select books for independent reading, to look at displays, or to use materials that were set up at learning centers.

Pullout ESL instruction constituted yet another kind of support service for teachers; such services were available for students in 8 of the 17 classes. What this instruction consisted in, however, varied from place to place. The ESL pullout classes we observed were of three major types: a) those that emphasized English phonics and reading using early or remedial reading materials, or packaged materials such as "DISTAR"; b) those that offered NES and LES students language help and tutoring on the work assigned to them by their regular classroom teachers, and little else; and finally, c) those that actually provided formal instruction in English, usually in the form of pattern or vocabulary drills based on materials taken from sets such as the "IDEA" Kit or "Peabody Oral Language Development Kits".

The amount of pullout services available to students varied considerably across sites. In one school, the most needy students were given four 45 minute ESL lessons each week. In another school, students received only two 20 minute lessons per week. The services that were available to individuals depended somewhat on how much help they needed, but more critically, on how great the demands were for such services at each school. The greater the number of non-English speaking newcomers there were at a school, the fewer services any individual student could hope to receive there. The schools were not able to add classes as needed during the school year, apparently. As new students arrived, they were packed into already tight ESL schedules. Oftentimes, newcomers who knew no English at all could be accommodated only by moving other students around or out of the ESL program altogether. Students who knew barely enough English to get by were

dropped from classes, or they were given fewer sessions per week than were helpful to them.

In the case of one Chinese bilingual class (3C2), pullout ESL services were available for the most limited speakers of English at the beginning of the school year, but they were dropped from the program after 3 months because space in the available ESL classes had to be made for the many new non-English speaking refugee students that were showing up at the school. The bilingual classes in the school were filled to capacity, and the newcomers were being placed in English-only classes. Top priority for pullout ESL instruction was given to the NES students in the English-only classes because their teachers were thought to be in greater need of language support than were the teachers in the bilingual classes. The teachers in the all-English classes were not geared up to provide language instruction as a rule. If the NES and LES students were to get any instruction in ESL, they had to get it elsewhere. The bilingual program, on the other hand, was seen as having been set up just to provide the specialized language instruction needed by such students, and the teachers in those classes were expected to be capable of providing the ESL instruction needed by their NES and LES students. There was some sort of ESL instruction provided in most of the bilingual classes, although what was called "ESL" varied considerably, as did the amount of time and thought devoted to such instruction, just as in the pullout classes.

### 3.1.2. Activity Structure in the Classrooms

The 17 classrooms in the study varied according to the ways their teachers chose to structure instructional activities in them. This had the effect of varying the amount and kind of language input and experience available to the LEP students in a number of ways. As will be discussed later in this chapter, the acquisition and development of second language skills depends on adequate exposure to the target language as it is used by proficient speakers, and on opportunities to practice using it in direct communication with speakers. Such linguistic input serves as the data or evidence on which learners are to base their learning of the language itself. In any classroom situation, there are two major sources of linguistic input for LEP students: from adults, that is, the teachers and personnel in the class who can interact with the LEP students either individually and or in groups, in formal instructional activities or in informal activities; and from English-speaking or bilingual classmates, either in group learning activities, or in individual contacts having to do with schoolwork or otherwise. How the class is organized, and how instructional activities are structured can greatly affect the quantity and quality of input from both sources. Where classes and instructional activities are organized in ways that constrains or otherwise limits the kind of contact that students can have with each other, LEP students will get little input from classmates. The amount of language input available to them from teachers depends very much on how instructional activities, both formal and informal, are organized. Different activity structures or lesson organizations result in dif-



ferent amounts and types of teacher language, and in the size of the audience for that language.

Activity structure can be described in a number of different ways that are relevant to linguistic input. For example, it can be categorized according to the way in which the students in the class are subdivided for instruction. There are three basic alternatives. The first can be described as "whole class" instruction whereby the teacher has everyone in the class engaged in the same activity at the same time, and where the teacher talks to everyone at once. In this case, every student in the class is exposed to everything that the teacher says, and presumably, what is said constitutes input for all. The amount of practice students get in using the language themselves in this type of activity depends on the kind and amount of verbal participation teachers invite from them. The second common arrangement can be described as "small groups", wherein students are subdivided into subsets for instruction, and the teacher works with just one group at a time, while the other members of the class work either on their own, or in groups without a teacher. Often, the teacher assistant supervises the work of the students who are not involved in group instruction with the teacher. This is a common setup both for reading and math instruction where a class may be subdivided into as many as five groups, and the teacher divides his or her time with the groups. In such instructional arrangements, how much teacher input individual students get depends on how frequently their groups meet with the teacher, for how long. Each group works with the teacher for only a percentage of the time (say, a fifth, a fourth, a third, etc.,) of the



time devoted to that activity, depending on how many groups the teacher has to work with. The other popular configuration is "individual instruction" where students are given assignments to do on their own; these seatwork assignments can involve workbook exercises, self-paced supplemental materials, journal or story writing, self-selected reading materials, and the like. In this case, there is little interaction with the teacher; teachers may interact with individual students when they ask for assistance, or in the course of monitoring the work of students while they work, but otherwise there is no "formal instruction" during such activities. Categorizing instructional activities according to the size of the group involved can give a rough picture of how much teacher input students get in classes, but we also recognize that it can be misleading too. During instructional activities that are organized around individual work, teachers can and often spend a lot of time working with individual students who need special help. This kind of one on one teaching can be extremely useful to students, both for the specially tailored help they are given on their schoolwork, and for the language input that they receive. When teachers talk to students individually, the talk is much more likely to be adjusted to a level that is appropriate for them than is the language teachers use in group lessons. One of the reasons for giving students individual work assignments is that this then frees the teacher to provide this kind of individual assistance.

A second major way of characterizing the structure of instructional activities with respect to amount and type of linguistic input they provide for language learners has to do with the extent to which

they are directed by teachers. There are various degrees of teacher direction. At one extreme, there are those activities that are quite free of teacher involvement. Students are given work to do on their own or in groups, and while this work is monitored by the teacher, the teacher does not make any presentations, or does not otherwise become the center of the activity. Students may consult the teacher, or the teacher may check on the students while they are working, but in general, the teacher is not directing the activity. At other extreme, there are activities that can be described as "teacher-directed", lessons which are teacher structured and paced, wherein the teacher presents materials to be covered, and leads the participants (whole class, group or individuals) in discussion of the materials. In such activities, the language used by teacher in presenting the materials to be learned is a potential source of linguistic input for the LEP students. Whether or not it works as input depends on what language is used, and just how it is used (more on this later). In between these two extremes are activities involving various degrees of teacher supervision. In some, teachers may make a short presentation, then give the students individual or group assignments to do on their own for a time, and then direct the class in discussing the activity.

In our efforts to characterize and compare the instructional programs in the 19 classrooms in the study (rather, the instructional practices experienced by the 17 classes involved in the study) we looked at the observational data we had collected of activity structure both in terms of grouping and in the degree to which they were teacher structured. Let us consider first the findings of our exami-

nation of grouping practices. As Table 3.2 shows, the 19 teachers varied in the degree to which they tended to structure classroom activity.

The figures given on Table 3.2 were computed by sampling instructional activities recorded during several different days of observations in each of the 19 teacher's classrooms. The sampled activities consisted of a minimum of 207, and a maximum of 496 total minutes of observations per classroom. Recording materials included audio and video recorded lessons, and field notes allowed us to compute the amount of time that students were involved in "whole class", "small

Table 3.2

Percentage of Time Devoted to Three Different Types of Activity Groupings Across Sites

| Class | Teacher | WholeClass | SmallGroup | Individual | Mins. sampled |
|-------|---------|------------|------------|------------|---------------|
| 3C1   | TC1A    | 39%        | 19%        | 42%        | 246           |
|       | TC1B    | 30%        | 45%        | 25%        | 283           |
| 3C2   | TC2     | 24%        | 30%        | 46%        | 310           |
| 3C3   | TC3A    | 17%        | 51%        | 32%        | 235           |
|       | TC3B    | 36%        | 28%        | 36%        | 215           |
| 3C4   | TC4     | 30%        | 22%        | 48%        | 424           |
| 3C5   | TC5     | 49%        | 32%        | 19%        | 439           |
| 3C6   | TC6     | 22%        | 12%        | 66%        | 455           |
| 3S1   | TS1     | 27%        | 37%        | 36%        | 487           |
| 3S2   | TS2     | 37%        | 43%        | 29%        | 485           |
| 3S3   | TS3     | 43%        | 12%        | 45%        | 270           |
| 3S4   | TS4     | 44%        | 31%        | 25%        | 496           |
| 3S5   | TS5     | 48%        | 30%        | 22%        | 462           |
| 3S6   | TS6     | 35%        | 48%        | 17%        | 255           |
| 3S7   | TS7     | 26%        | 14%        | 60%        | 255           |
| 5C1   | TC7     | 27%        | 39%        | 34%        | 449           |
| 5C2   | TC8     | 37%        | 24%        | 39%        | 533           |
| 5S1   | TS8     | 38%        | 28%        | 34%        | 485           |
| 5S2   | TS9     | 35%        | 26%        | 39%        | 280           |

group", and "individual" activities in each site. As shown on Table 3.2, all of the teachers made use of the three grouping patterns in structuring activities. However, differences between the teachers serving the Chinese students and those serving Hispanic students can be seen when percentage of time spent in different arrangements are compared. 7 of the 9 teachers of the Hispanic classes spent more than 35% of the time in "whole class" activities. In contrast, only 4 of the 10 teachers in the Chinese classes spent as much time in such activities. The lowest percentage of time in whole class activities was 17% in Teacher TC3A's classroom, and the highest was 49% in TC5's. In general, the teachers in the Chinese classes tended to preferred individual activities for their students: this arrangement was used more than 35% of the time by 6 of the 10 teachers in Chinese classes, while only 4 of the 9 teachers in Hispanic teachers used it as frequently. Small group arrangements were about equally popular with the teachers of the Chinese and Hispanic classes. They were used more than 35% of the time by 3 teachers from each group.

From the table, it can be seen that two configurations of activities were common to a number of teachers. A pattern consisting of more whole class and small group activities than individual activities can be seen for 6 teachers (TC1B, TC5, TS2, TS4, TS5 and TS6). A second pattern consisting of a preference for either whole class or individual activities can be seen in the classrooms of another 7 (TS3, TS8, TS9, TC1A, TC3B, TC4, and TC8). Students in those classrooms were involved in small group activities less frequently than they were in whole class or individual activities. A less common configuration

consisted of more frequent use of small group and individual activities than whole class activities. This can be seen in the classes of three teachers (TS2, TC3A, TC7). Finally, two teachers (TC6 and TS7) made heavier use of individual activities than any other type of arrangement.

Activity structure when looked at in terms of grouping, however, can be misleading, especially if we are concerned with what it can tell us about the amount of exposure LEP students can get to English in various classrooms. The reason we considered activity structure from the standpoint of grouping was that we assumed that children in different classrooms are exposed to widely differing amounts of active involvement with teacher and peer language input over the school year, based on the way activities are organized. This examination indeed gave us a rough comparison of different organizational patterns that existed across our study classrooms. It did not, however, give us a very accurate picture of how much contact individual students had with the users of the target language. The time students spent in whole class and in small group was not necessarily spent in shared verbal activity; in fact, it was quite frequently spent in individual work. Writing, for example, was a "whole class" activity in many classes; during the period devoted to this subject, all of the students worked by themselves in their journals or on essays. According to our criteria, we had to categorize such lessons as "whole class activities" since indeed everyone in the class had been given the same assignment, and they were working on it at the same time.

What we discovered when we took a second look at activity structure, this time by the amount of time individual students spent in teacher directed instructional activities versus self-directed activities gave us a quite different picture of the instructional experience of the students in our seventeen classes. The percentage of time they were engaged in instructional activities that did not involve teacher intervention or direction was always greater than the figures shown on Table 3.2 for "individual" activities. In some classes a substantial part of the small group and whole class activities consisted, in fact, of assignments which were given to students to work on by themselves. Table 3.3 shows how the 17 classes compared in activity structure looked at in terms of teacher involvement.

The figures on this Table 3.3 are given for classes rather than for teachers, since the aim in this analysis was to determine how much actual time our LEP subjects spent in instructional activities in which they were exposed to the kind of linguistic and academic input teachers could provide them over the course of an average school day. In order to derive figures for the two team taught classes (3C1 and 3C2) each of which split its time between two teachers (alternate days for one, and alternate sessions for the other), times were taken from observations spanning three or four days and averages were computed from them. The method we followed in arriving at the figures presented on Table 3.3 was to record the amount of time our target subjects spent in teacher directed instruction, self-directed seatwork, or collaborative group work. Because there was little evidence of the third category of activity, it was combined into the self-directed work

Table 3.3  
Time\* Spent by Students in Teacher Directed  
vs. Self-Directed Activities in the 17 Classes

| Class Code | Tot.Inst Mins/Day | TchrDirect WC* or Grp | SelfDirect SW* or Grp | Transition/Pullout or Unaccounted |
|------------|-------------------|-----------------------|-----------------------|-----------------------------------|
| 3C1**      | 260               | 61mins (23%)          | 153 (59%)             | 47 (18%)                          |
| 3C2        | 225               | 61 (29%)              | 114 (51%)             | 45 (20%)                          |
| 3C3**      | 260               | 123 (47%)             | 127 (49%)             | 10 (4%)                           |
| 3C4        | 225               | 72 (32%)              | 133 (59%)             | 20 (8%)                           |
| 3C5        | 225               | 115 (51%)             | 100 (44%)             | 10 (4%)                           |
| 3C6        | 225               | 10 (4%)               | 210 (93%)             | 5 (2%)                            |
| 3S1        | 225               | 115 (51%)             | 110 (49%)             | 0 (0%)                            |
| 3S2        | 250               | 85 (34%)              | 135 (54%)             | 30 (12%)                          |
| 3S3        | 225               | 40 (18%)              | 175 (78%)             | 10 (4%)                           |
| 3S4        | 225               | 45 (20%)              | 115 (51%)             | 65 (29%)                          |
| 3S5        | 225               | 110 (49%)             | 115 (51%)             | 0 (0%)                            |
| 3S6        | 250               | 85 (34%)              | 150 (60%)             | 15 (6%)                           |
| 3S7        | 250               | 18 (7%)               | 200 (80%)             | 32 (13%)                          |
| 5C1        | 300               | 80 (27%)              | 210 (70%)             | 10 (3%)                           |
| 5C2        | 300               | 60 (20%)              | 180 (60%)             | 60 (20%)                          |
| 5S1        | 300               | 140 (47%)             | 160 (53%)             | 0 (0%)                            |
| 5S~        | 275               | 64 (23%)              | 165 (60%)             | 46 (17%)                          |

\*Time by average number of minutes each day and percent of daily total instruction time; WC = Whole Class, SW = Seat Work. \*\*The times given here for the team-taught classes were computed by combining the time the students spent in different types of activities in both classrooms, and averaged over the course of several days.

category. The observational materials used for this analysis consisted of audio recordings and field notes that were made during all-day visits to the classrooms. Recording of activities involving our subjects began as they arrived at school in the morning and ended as they left at the end of the day. Times were noted for the time they spent in various types of activities, and observational notes were made of what was done during these activities, what materials were covered, who interacted with the students (teachers, aides, class-



mates), in what language and the like. In doing these observations it became evident that the students in a given class did not necessarily have the same instructional experience. When the practice of dividing students into subgroups for instruction was discussed in the previous section, it was noted that teachers divide their time among groups, working with each of them for a part of the period devoted to a given subject. Some teachers took extreme care to see that their instructional time and attention were equally distributed, and that all students in the class got the help they needed. Other teachers paid less attention to such matters.

We found in some classes that different groups got widely varying amounts of teacher attention; as a result, different students had very different sorts of experiences in their classes. In one class, for example, students were divided into 4 reading groups; each group spent a part of the hour long reading period being instructed by the teacher and the rest of the time doing seatwork. The teacher worked with the highest group first each day, after briefly going over the workbook assignments for the other three groups. When she was done with that group, she would take the next highest group, and so forth. On the first day this teacher was observed, she spent 25 minutes with the top group, 17 with the second group, 12 minutes with the third, and a scant 5 minutes with the lowest group. On the second observation, she spent 23 minutes with the top group, 20 minutes with the second group, 10 minutes with the third, and 8 minutes with the lowest. Since most of our subjects were in the lowest two groups, they were getting on the average just 8.75 minutes of teacher directed small



group reading instruction per day. In contrast, the two top groups were receiving an average of 21.25 minutes of reading instruction from their teacher each day. In computing the amount of teacher directed instruction students received in this classroom, we used the average for the lower groups since that was where our subjects were.

An examination of Table 3.3 will show that in general, the students, in all of our sites spent a good part of each day engaged in instructional activities that could be described as individual or self-directed. 14 of the 17 classes spent over 50% of the day at such activities. Two classes were extremely high in activities of this type: 3C6 and 3S7 which spent 93% and 80% of each day respectively engaged in individual learning activities. The lowest was 3S5 with 44%.

The amount of teacher directed instruction available to our subjects varied enormously across sites, from a low of 4% (3C6), to a high of 51% for two classes (3C5 and 3S1). As might be expected, there was a negative correlation between teacher directed instruction and self-directed instruction. In general, however, teachers who did a lot of formal teaching tended to balance it off with equal amounts of individual work assignments. With those who did relatively less formal teaching, the amount of time they had students working on individual assignments was inversely proportional to the amount of time they spent engaged in teacher directed instruction.

### 3.1.3. Teacher Language Usage in Instruction

A number of sets of data were collected which incorporate examples of actual teacher language in the classroom. Audiotape recordings were made regularly throughout the year as an accompaniment to different observational exercises. One observation schedule, performed six times over the year, specifically focused on the teacher, and thus generally provided good samples of teacher language. A second schedule followed individual target subjects many times over the year, using a portable tape recorder in a backpack on the child. These samples contained teacher language only when the child happened to be working close to the teacher during the recording period. The third kind of observation was conducted in order to get a general description of classroom events, and these recordings, which were made at the beginning and middle of the year also contain samples of teacher language.

In addition to these, video recordings were also made at least twice during the year for a total of a minimum of four full days of tape for each class. We did not receive permission to make video recordings in one of the participating school districts, but we did make additional audio recordings to compensate for this. The video recordings contain the best record of teacher language, as they are generally uninterrupted, and are easier to interpret and code because of the extra information provided by the visual mode.

Given these many and varied samples of teacher language, it was necessary to devise several different coding systems in order to get

at the different aspects of usage that were of concern in this study.

The first of these was a simple coding system which yielded the information we needed on usage patterns in classrooms; it allowed us to get a fairly detailed picture of the teachers' use of the languages of instruction (English and the students' L1 in the case of the bilingual classrooms), information on the degree to which, and under what circumstances English was used, what teacher language the children were exposed to, and the functional characteristics of that language. The system we devised for this coding necessitated only a single monitoring of each tape and no transcription. While listening to the tape, the coder: (1) timed each event, (2) timed the teacher's use of English and L1, (3) assigned each utterance or utterance unit to one of nine functional categories and recorded it on a tally sheet, (4) categorized the reason behind each instance of language switch, and marked it on the same tally sheet, and (5) described the event according to content and activity structure.

An event was defined as a lesson or transition period, whose boundaries were determined by a change in either content matter (e.g., from math to reading), or in activity structure (e.g., from whole class to individual). Timing was effected by the manipulation of three stopwatches. One watch measured the elapsed time of the event. A second was activated when the teacher began an utterance in English and stopped at the end of a dialogue, such as a question/answer routine, or stopped at the end of a dialogue, such as a question/answer routine, or after three seconds of silence if there was no reason to expect continued dialogue (for example after a directive to "be

quiet"), or at the onset of talk in the other language. The third stopwatch registered time spent using Spanish or Cantonese, and was operated according to the same principles. The difference between elapsed time and the teacher's English and Spanish/Cantonese talk was computed as a measure of "teacher silence". Periods of teacher silence might be accompanied by children talking among themselves, reading out loud, or engaging in a class discussion. Alternatively the whole class might be silent during a test, a seatwork assignment, or quiet reading. In order for the amount of child language produced during an event to be assessed, the coder made a subjective rating of the children's language participation on a five-point scale from very high to very low. If an utterance was repeated, the coder wrote an "R" in place of a line, and a "C" if it was in Chinese, an "S" if in Spanish. The most striking finding in doing this analysis concerned the very limited use of the students' L1's by the bilingual teachers. Table 3.4 shows the breakdown of language use by the teachers of the Spanish speakers, and Table 3.5 shows the patterns of use for the Cantonese group.

Teacher TS2 was the only teacher to use Spanish frequently (24% of the time), while three others used it 8% of the time, and the fifth just 2% of the time. Nearly all of the bilingual teachers made some use of translations, but only four of them relied on it to any extent. Teachers TS1, TS3, TC3B and TC7, averaged one translation every 3 to 5 minutes. The effects of this practice will be discussed in the section on teacher language use variables later in this chapter. There were in addition to the instances of translation which were counted

Table 3.4  
Teachers' Use of English, Spanish, or Silence, and Minutes  
between Instances of Translation

| Teacher | % Engl. | % Span. | % Silence | Mins. betw.<br>Translation | Total mins.<br>sampled |
|---------|---------|---------|-----------|----------------------------|------------------------|
| TS1     | 60      | 8       | 32        | 5                          | 487                    |
| TS2     | 49      | 24      | 27        | 6                          | 119                    |
| TS3     | 53      | 8       | 39        | 3                          | 270                    |
| TS4     | 58      | 2       | 41        | 16                         | 496                    |
| TS5     | 69      | NA      | 31        | NA                         | 462                    |
| TS6     | 62      | NA      | 38        | NA                         | 251                    |
| TS7     | 63      | NA      | 37        | NA                         | 255                    |
| TS8     | 52      | 8       | 40        | 7                          | 177                    |
| TS9     | 49      | NA      | 51        | NA                         | 280                    |

Table 3.5  
Teachers' Use of English, Cantonese, or Silence, and Minutes  
between Instances of Translation

| Teacher | % Engl. | % Cant. | % Silence | Mins. betw.<br>Translation | Total mins.<br>sampled |
|---------|---------|---------|-----------|----------------------------|------------------------|
| TC1A    | 64      | NA      | 36        | NA                         | 246                    |
| TC1B    | 54      | 1       | 45        | --                         | 283                    |
| TC2     | 30      | 0       | 70        | 0                          | 375                    |
| TC3A    | 59      | NA      | 41        | NA                         | 235                    |
| TC3B    | 46      | 6       | 48        | 3.5                        | 215                    |
| TC4     | 30      | 1       | 69        | 31                         | 493                    |
| TC5     | 54      | NA      | 46        | NA                         | 439                    |
| TC6     | 14      | NA      | 86        | NA                         | 455                    |
| TC7     | 41      | 10      | 49        | 3                          | 449                    |
| TC8     | 54      | NA      | 46        | NA                         | 533                    |

here, lexical mixings in which a, say, Spanish equivalent to a single vocabulary item or phrase was embedded in an otherwise English utterance. Such occurrences were too short to be timed on a stopwatch and were therefore not even considered part of the teacher's talk in Spanish. Generally teachers talked more often than they were silent. The most vocal of the teachers (TS5, TS7 and TC1B) 76%, 69% and 64% of the time they were in class, while the ratio for the rest was about 60:40. The teachers of Chinese speakers used even less of the

students' L1 than the Spanish group, and they generally talked much less. The only one of the Chinese bilingual teachers who used Cantonese to any extent at all was TC7, the teacher of the fifth grade bilingual class. The only other Chinese bilingual teacher who used Cantonese much was TC3B. The other two Chinese bilingual teachers' use of Cantonese was negligible. They used it for explaining things to individual students, but they rarely if ever used it during formal instructional activities. Teacher TC2 used it only during informal contacts with students. It should be noted that in both the Chinese and the Hispanic bilingual classes, the aides made considerably greater use of the students' L1 than did the teachers. They tutored individual students in the L1 as needed, generally, and in a few cases, they did some formal instructing to groups as well. We did not, however, systematically study the language use of the teacher's aides as we did for the teachers.

Among the teachers of the Chinese students, three were silent substantially more than they talked (Teacher TC2, TC4, and TC6), and the figures for the other teachers generally showed higher proportions of silence than for the Spanish group. It is not surprising that the three teachers who talked the least were also the three who made the greatest use of individual seatwork activities. As we shall see, the reduced amount of teacher input available to students in these classrooms did affect their development of English over the course of the school year.

The second analysis that was performed on the language used by teachers in these classes involved a considerably more complex coding

scheme which allowed us to look at qualitative dimensions of this language. In that analysis, the English used by teachers during instructional activities was examined from the standpoint of whether or not it fitted the characteristics of "linguistic input". The purpose of this examination was to try to determine how the language used by the teachers affect the language learning efforts of the students. This latter analysis and the variables that derived from it are discussed in considerable detail in a later section in this chapter.

### 3.2. Independent Variables

In the remainder of this chapter, we describe the instructional practices that we selected for examination as independent variables, and the methods we followed in assessing aspects of those practices. First, we discuss variables that relate to instructional aspects of the classroom (Instructional Practice Variables), then we discuss variables that relate to how language was used in the classroom (Instructional Language Use Variables).

#### 3.2.1. Instructional Practice Variables

##### 3.2.1.1. Noise and Activity Level

This variable was derived from ratings on two closely related characteristics of classroom life: noise level, and physical activity and movement level. High ratings on these dimensions indicated a low level of noise, physical activity and movement in the classroom

generally: that is, they were low enough not to distract students who were trying to work, or to prevent students from hearing the teacher. Our observations revealed considerable variation on these dimensions. There was, in some classrooms, little movement or noise for large periods of the school day. Students spent much of their time at their desks, and worked silently on individual assignments. The only sounds one heard for extended periods of each day were those of pencils or erasers against papers, pages turning, occasional whispering, and sometimes, a sigh or two. In contrast, there were, in other classrooms, a constant movement of objects and persons and, as one might expect, a level of noise that was in keeping with the physical activity in the classroom. Students worked at their assigned places, but they also moved about the classroom to get materials to work on, to seek help from the teacher or classmates on their assignments, or to check on the progress of friends at work or on the current status of the pencil sharpener.

Noise and activity levels were notable characteristics of different classrooms, but it should be said that very low levels of these did not necessarily add up to a positive feature. With as many as 35 children and two adults at work in one room, a certain amount of movement and noise can be expected. In fact, well-designed classroom programs provide students with varied instructional experiences and activities. At any given time, there might be several different activities going on in the classroom: a teacher instructing a group in one part of the room, an aide helping another across the room, and students working independently on assigned or self-selected materials



at other locations. Such varied activities can generate a fair amount of noise and movement, all of which are natural by-products of learning and growth in a busy classroom. It is only when noise and activity reach levels that interfere with mental concentration or the ability to hear that they are problematic. Extremely low levels may in fact indicate the kind of rigid control that is not particularly conducive to learning and intellectual development.

Several factors which appear to be influence the amount of activity and concomitant noise level in classrooms. Control is one. Some of the noisiest classes were those with teachers who had difficulty maintaining control. It was not for want of trying in most cases. Such teachers tended to expend considerable effort in establishing order, although all too often, their efforts resulted in an increase, rather than a decrease in the general noise level since they had to shout in order to be heard above the din. Teacher tolerance is another factor. Some of the noisier classrooms were ones with teachers who were simply more tolerant of a noisy environment. They seemed to regard the noise and activity in their classrooms as a natural outcome of children who are busily at work. A third factor influencing the noise and activity levels found in classrooms had to do with the acoustics and physical housing of the classroom. Three of the 19 classrooms involved in the study were located in "open pod" buildings, which housed from 6 to 8 classes each. There were partitions in these buildings dividing the space into "classroom" areas, but as they did not completely enclose them, each area was open to the noise and movement of the others. Although carpeting and furniture dampened the

sound in these pods somewhat, the noise emanating from the activity of as many as 240 students and 16 teachers and aides under one roof was at times, was nearly deafening. In such situations, not only did teachers have to compete with the noise coming from the other classes, they also had to fight the acoustics. Anything quieter than a shout tended to get lost in the space, so children and teachers alike had to shout almost, in order to be heard.

The three teachers who found themselves in such classrooms responded quite differently to the special challenge presented by the physical setting. Interestingly, how well they managed depended in large part on how the various factors influencing noise and activity interacted in their classrooms; that is, it depended on their ability to maintain an orderly and controlled environment despite the distractions from external sources, on their tolerance for noise and confusion, and on how they structured the learning activities in their classrooms. One was able to handle the situation very well. She was extraordinarily calm and business-like, and had a calm, business-like class of students to work. Although surrounded by extremely noisy classes, her classroom area was a peaceful oasis in the pod. She occasionally complained about the constant commotion that went on in the classrooms on all sides, as she tried to make herself heard, and her lessons were sometimes drowned out completely by the ambient noise in the pod, she generally managed to rise above it all. A second of our teachers, in a similar situation, was much more bothered by the noise around her. She was troubled by a very soft voice, which did not carry well enough to be heard in the cavernous pod. This teacher

resorted to organizing much of her instruction around individual instruction in which she worked with just one student at a time, or as small, small group instruction where, seated just inches from her students, she could make herself heard. Her classroom was one of the noisier ones in the sample, and indeed in the building. While the teacher was working with individual students or small groups, the rest of the class was supposed to be working on individual assignments; the students mostly did work, but they also did a lot of talking as they worked, and some liked to break the monotony of work with occasional strolls around the classroom as well. Hence this classroom was noisier than most, but not bothersomely so; since the teacher did not seem to mind it.

The teacher who was especially bothered by the open pod arrangement apparently had little tolerance for noise, and had students she felt needed frequent reprimanding about talking too much, about being out of their seats, about not staying on task, and the like. Instruction in this class was conducted either as whole class events, in which the teacher presented materials to the entire class, or as seat-work assignments which students were supposed to carry out on their own. A certain amount of talking and movement was inevitable, since the students liked to consult the teacher, and one another on these workbook or individual assignments. The whole class lessons were particularly difficult for this teacher: she tried to make herself heard above the noise by talking above it, and although she might start out fairly calm in the early morning, her voice became increasingly shrill as the day wore on. By early afternoon, she was often hoarse. and

irritable--which didn't help her tolerance for the noise and confusion in the environment. When the teacher's irritation began to show, the students in this class tended to become more unruly, and louder, with the result that the teacher would become more irritated, and so on.

How noise and activity level in the classroom can affect language learning may or may not be obvious. The point is that in order for students to learn what is being taught at school, and to develop their skills in the school language, they have to be able to hear what their teachers and classmates are saying. A noisy classroom is probably not an optimal learning environment for anyone, but it is more problematic for students who are not fully proficient in the school language than it is for those who are. Research (Dornic, 1979) has shown that the less proficient one is in a language, the more one's comprehension of that language is affected by extraneous noise. Students who are fully proficient in English can often figure out what classmates and teachers are saying, even in the noisiest classroom environments since they know the language well enough to fill in the gaps in what they do hear. When students are not fully proficient in the language of instruction, which was the case for many of the LEP students in this study, they have difficulty enough understanding what is being taught, even under the best of conditions. If they have any difficulty hearing what is being said as well, they will get little out of the experience. But while classrooms that are too noisy pose one kind of problem for language learners, ones that are at the other extreme can be just as problematic. Classrooms that are extremely quiet are so by virtue of students not being permitted to do much talking. In order

for students to develop proficiency in a language, they need practice in speaking it. From the language learner's point of view, the best kind of situation is one in which one can hear, and be heard.

### 3.2.1.2. Distractability

This variable consists of ratings on a single dimension, that is, on the extent to which teachers permitted themselves to be interrupted, or distracted from what they were presenting in lessons. Distractability is a trait that is usually considered in relation to the behavior of children in instructional settings, rather than as a characteristic of their teachers, but in fact, we have been persuaded by our classroom observations to regard this as a teacher characteristic that needed to be examined. It can be difficult for teachers to cover all the materials that must be taught and to accomplish all they would like to do in the time allocated for each lesson when they have to deal with the demands for time and individual attention coming from as many as 30 students at a time. And yet, teachers do have to be responsive to individual interests and special needs.

Like the previously discussed variable, a high rating on this one indicates low distractability. This variable and the noise and activity level variable are correlated to a high degree, owing in part to the relatedness of both variables to teacher control. Some teachers exert such a high degree of control in their classes, that they do not allow anything to interfere with the course they are following. Others are easily diverted, both by things that students might bring

up during lessons, or by matters that arise in the course of their teaching. Students frequently bring up tangential points, and some teachers allow the class to follow these up to such an extent that they lose track of what they were trying to teach in the first place. Others stick strictly to the materials at hand, and will not consider anything else, even when potentially relevant or interesting side-points are suggested. One of the factors affecting this variable has to do with how open teachers are to student contributions during lessons: some welcome their comments; other do not. Students participation in some classrooms is limited to responding to specific questions which teachers ask in order to determine whether the students understand the materials that have been taught. Another factor is approachability. Some teachers encourage students to let them know whenever they don't understand, or when they want help in their work; others prefer that students wait until they are asked specifically if they need help or whatever.

Control, however, was the factor that was most closely associated with this variable. The teachers who were the least distractable were the three who exercised the highest degree of control in the classroom. One was relatively approachable, and another was fairly open to student participation; but all three were teachers who left no doubt as to who was in charge in their classrooms. Of the three teachers who were found to be the most easily distracted, two were very approachable, and permitted their students to interrupt them anytime at all. One of them was a teacher who invited a high degree of open discussion in her lessons as well. All three were teachers who could be

described as having a fairly low level of control over their classes, and things were often quite noisy in their classes.

How is this teacher characteristic relevant to language learning? Teachers who are easily sidetracked in their teaching may not provide the continuity and coherence in the presentation of lessons that enable students to make use of the instructional language spoken during these lessons as linguistic input. On the other hand, the language used in lessons taught by teachers who do not tolerate interruptions may be equally unusable as input. When teaching LEP students in English, teachers must make constant adjustments, both in the materials that are being presented, and in the language that is being used. These adjustments are ordinarily based on feedback provided by the students as they respond to the lesson. When students indicate that they comprehend what is being taught, teachers can continue with the lesson; when they indicate that they do not understand, then teachers need to make adjustments in the way they present their materials, or in the language they use. An intolerance for interruption may go along with a general insensitivity to the need to consider student response and feedback in teaching. This is another variable in which extremes at either end may not be conducive to language development.

### 3.2.1.3. Academic Work Orientation

This variable comprises 3 dimensions on which classroom programs were rated: the extent to which children were engaged in work, or



were "on task"; the extent to which time during the school day was devoted to academic learning activities rather than make-work activities or games and crafts; and the extent to which there was evidence of preplanning and teacher preparation in instructional activities and events. Together, these three dimensions add up to an "academic factor", one which provides a measure of a teacher's overall instructional focus. Some diversity in activity is desirable, of course. Children may derive maximal benefit from school even if they do not spend every minute of the school day engaged in serious study. They need breaks in their work, and they can learn useful skills through craft activities, and by playing games. But in order to acquire the academic skills and knowledge they are expected to get from school the biggest part of the day must be devoted to academic learning. Activities that are focused on developing basic skills and on imparting subject matter to the students have to be the main focus of a teacher's instructional program.

The teachers varied somewhat less on this variable than on many of the others on which they were rated. More of them were rated high, than low on this dimension. 13 of the 19 teachers ran their classes in such a way that students were largely engaged in work designed to develop academic skills and knowledge (i.e., they were given ratings of 5 to 7 on a 1 to 7 scale). Teachers who emphasized academic learning in their programs were also ones who tended to do a lot of preplanning in organizing their programs. They had materials prepared, and usually had activities organized well in advance. The lowest rated classes were ones in which there was a large percentage of



"down-time" (that is, time spent on transitions between activities, in getting students settled down for activities, or in students doing nothing at all while waiting, say for assignments) and in busy work, or pointless activities. Inadequate planning by the teacher, or poor organization was a major problem in the case of several of these classes. Because they did not have events planned or materials prepared in advance, these teachers sometimes wasted a lot of class-time looking for things, or in makeshift activities that did not work out. These makeshift activities frequently involved make-work tasks (e.g., having students copy texts from the blackboard into their notebooks; having them trace pictures of objects whose names they were supposed to be learning from illustrated dictionaries, and then coloring and cutting them out, before pasting them into their notebooks.) These low classes were ones in which teachers tended not to monitor student work closely, so that students were often less engaged in their work than they might have been. In the two lowest rated classes, as much as a third of the school day was likely to be spent on pointless activities, (e.g., making color paper collages of aquarium scenes as a "science" activity, or spending the afternoon playing television inspired games such as "Family Feud".) A substantial part of each day in all 6 of the low rated classes was frequently frittered away either in busy work, or in doing nothing at all, but the two lowest classes were particularly poor in this regard. Not only were there a lot of pointless activities, but students tended to waste an inordinate amount of time in getting to work, whatever the task.

This variable is one which more likely affects academic learning in general than language learning specifically. In 5 of the 6 classes which were rated the lowest on variable, from 18% to 20% of each school day was found to be lost between activities, or in extraneous activities (this does not include those activities that might be judged as "non-academic" or as academically pointless), but in matters such as ----- . Even assuming that everything else they did in those classes were equal in educational value to that of the instructional activities conducted in the 10 classes in which less than 5% of the time was lost between activities, the students in these 5 classes are still getting substantially less instruction each day than the students in the 10 higher rated classes. However, the instructional programs in the high and the low rated classes are, as a rule not equal in quality, owing to the conspicuous lack of planning and to the lack of educational focus in the low classes. If quantity and quality in the instructional program provided for language learners play any part at all in the development of language skills, this variable is an important one to consider, whether or not it can be shown to be related to short term gains on test scores.

#### 3.2.1.4. Peer Interaction on Schoolwork

This variable consists of a single dimension on which instructional programs were rated, and that was on the extent to which peer interaction on school work was promoted and actually took place. As one might expect, this variable is generally correlated negatively with the low noise variable since children working and talking with

one another will result in a higher level of noise than children working by themselves. Several aspects of instructional programs relate to this variable: activity structure and teacher control. A major factor was in how teachers organized their instructional programs. Teachers who made use of arrangements such as peer teaching whether formal or not generally had classes in which there was a higher level of child interaction than teachers who emphasized individual work or teacher directed instruction in their programs. In fact, the lowest rated classes on this dimension included both the class with the teacher who made the heaviest use of individual focused instruction, and the one who made the greatest use of teacher directed instruction. Only 4 of the 19 teachers made much use of peer teaching arrangements, and of these only 1 made it a predominant, formal aspect of the program. Students in this class (one of the bilingual "flip-flop" classes) received as much as an hour and a half of peer teaching each day. However, these peer teaching arrangements were not symmetrical ones in which each individual is in turn both tutor and tutee. Instead, the arrangements involved the pairing of "advanced" students with "low" ones, with the advanced ones always playing the role of the tutor and the low students the role of tutee. The arrangements in the other classes were less formal. Teachers might assign students to work together on some writing assignment, or they might assign some of them to tutor or monitor the work of others. In some classes, interaction between students was fortuitious. Students were not assigned to work with each other, but teachers did not prevent them from talking with one another while they worked either. Whether or not these classes were rated high on this variable depended on the extent to

which the students appeared to be actually talking about work.

How relevant this variable is to English language development would appear to depend on a number of situational factors: how far along students have already gotten in their mastery of English; how inclined they are to use English during these interactions; and the nature of the interactions that take place between students when they are talking about their work. Students who are fairly advanced in English development will profit more from these interactions since they are more likely to have the level of proficiency in that language required for talking about their school work. Those who are beginners will profit from interactions with peers about school work in English only if those peers are fairly competent in that language. Otherwise, such interactions may actually be counterproductive where language learning is concerned. Ordinarily, however, when students who do not speak English well interact, they do so in their primary language, provided they share a common first language. When LEP students with different primary languages work with one another, the language they use is a partially learned version of English--and this may or may not be adequate for talking about their work. In some cases, teachers get around this problem by pairing students who are fairly proficient in English with ones who are less so, a practice which results in the LEP students getting better language input and practice than they would get in interactions with peers who were no more proficient than they in English. But here again, whether even these well-engineered peer interactions work for language learning depends on the nature of the interaction itself. The language spoken during a peer-tutoring

session is often quite limited. The following is fairly typical: the tutor's assignment is to drill the tutee on a list of spelling words; the tutor calls off a word; the tutee spells it, either in writing or orally; the tutor indicates whether the tutee was right or not, then goes on to the next word if it was correct, or has the tutee try again if it was not. Little input or practice can be gotten out of such an interaction, so while this kind of activity might benefit the development of academic skills in general, it may have no effect on language development.

#### 3.2.1.5. Instructional Model Use

This variable relates to the approaches teachers take in presenting instructional materials to students during lessons, and in structuring the lessons by which such materials are taught. Two separate rating dimensions figured in this variable, one related to the extent to which the teachers varied in their use of models of instruction, and the other in their apparent flexibility in using them. In considering model use, we looked both at methods of presenting information, and at the organization and structure of lessons. There are a variety of ways of looking at the structure of lessons: structure can be viewed in terms of the size of the group being taught (whole class, small group, or individuals), in the role played by the teacher during the lesson (one can distinguish teacher directed lessons in which a teacher takes the role as the center and main organizer of the learning activity, and serves as the source of the information to be taught, and child centered lessons in which the teacher's role is to

reflect and clarify student ideas, to facilitate the activity), or in the degree and manner of student participation in lessons (it can be active, where the mode of participation is discussion or practice, or passive, where participation is limited to listening or observation). Methods of presenting materials to students can be characterized in terms of the beliefs they reflect in teachers as to how children learn and what constitutes learning. The following are examples of methods we considered in our ratings of teaching approaches together with the models of learning they appear to reflect on the part of teachers:

- (1) Teachers present materials or demonstrate procedures which their students are to learn or to put to use in exercises. The view behind such an approach is that knowledge can be transmitted by exposure, and that learning occurs through observation.
- (2) Teachers present materials such as poems, associations, facts and correspondences to be memorized. The emphasis here is on rote learning based on the belief that memorization and imitation constitute effective ways of learning certain kinds of information or skills.
- (3) Teachers present questions, passages to be read, or other materials for which specific responses are elicited or modeled, and then children practice giving responses to other instances of like stimuli for which they receive selective reinforcement. The views behind this approach are that certain kinds of learning take place most efficiently when learners are given practice in making the desired responses, and that the reinforcement of

desired behaviors will facilitate learning.

- (4) Teachers present rules or concepts with their defining attributes, illustrate them by offering sample instances and noninstances, and then give their students practice in applying the rules that have been taught. The view here is that the training comes from this kind of practice will transfer to other situations as when students encounter new problems whose solution call for the application of the same rules or understandings. The approach is one that emphasizes deductive learning.
- (5) Teachers present instances of a concept and then has students work out the concept and its defining attribution. They may also elicit data or instances of a concept from the class, and then go on to have students figure out how to categorize these. The view behind this approach is that students learn principles most efficiently when they have figured them out for themselves, and that the training they receive in such activities will result in their learning strategies for understanding other like phenomena. The emphasis here is on inductive learning.
- (6) Teachers present puzzling events or situations for students to explore or to react to during a lesson. The view is that such experiences will develop the ability and inclination to confront new situations by seeking to understand them, and to look for meaning by analyzing apparent facts, rather than to take them as granted. This approach emphasizes the development of analytical and interpretative skills.



It should be emphasized that in our ratings we did not assume that one or another of these approaches was better than the others, or that any of these approaches would be appropriate across the board. What this variable consists of are ratings on the variety and flexibility in applying them in their programs of instruction. We did attempt to rate teachers on the extent to which they made use of specific ones of the approaches described here, but gave up because we could not determine the extent to which a given approach was used by each teacher based on the data we had available to us. We did, however, rate teachers on how effectively they were using the models we observed, but that rating has been incorporated into the "good teaching variable" which is discussed below rather than into the model use variable discussed here. Variation and flexibility in model use may be as relevant to language learning as they are to academic learning since the kind and amount of linguistic input and practice available to learners through the different models of teaching can vary substantially. This, of course, assumes that the more varied the opportunities that are available to LEP students to hear and practice English, the more likely they will be to learn it.

#### 3.2.1.6. Good Teaching

This variable concerns "teaching skill" in general, although its chief component is language use in teaching. It should be noted that while this variable is similar to, and correlates highly with the "instructional language as input" variables (see Section 3.2.2), the two sets of variables differ somewhat in focus and were derived from



different sets of rating dimensions. The emphasis in the present variable is on the promotion of subject matter learning, and on how teachers use language as the means for imparting information and developing academic skills in students. The emphasis in the input variable is on extent to which the language used by teachers promotes language development.

Differences between the dimensions that make up the two variables will be commented on as they come up in the discussion. This variable comprises eight separate dimensions on which teachers were rated. Several of these relate to the effectiveness of approach.

- (1) How effectively did teachers use the teaching models (for examples of teaching models, see the description of the model use variable above) they employed?
- (2) To what extent did they focus on teaching high level skills (for example, those involved in comprehension, integration of operations, or generalization)?
- (3) To what extent were the students in the class being asked to perform learning tasks (whether in oral or written work) that were appropriate for their levels of learning proficiency?

It should be noted that we were concerned in doing these ratings with the effect of instructional practices on academic development, and not on language development per se. In this variable, our ratings on appropriateness of level were concerned with the level of work being assigned to children, rather than the appropriateness of the

level of the language being used by teachers in presenting this work to them. Language is not irrelevant here, however, in that an important consideration in rating the match between the levels of learning tasks assigned to children and their levels of learning proficiency was whether the language demands of those tasks matched in any way the children's proficiency in the language. The rating dimension that figured in the input variable was concerned specifically with a match between language used by teachers in their presentation of materials to students given their apparent proficiency in the language of instruction.

The second aspect of this variable relates to a concern with comprehension.

- (1) How frequently did teachers check with children to determine whether they were being understood by the students (for example, to what extent did they use overt checks such as "Do you understand?" or "Do you want me to go over that again?")?
- (2) And, to what extent did teachers repeat or modify previous utterances, either by upgrading, downgrading or paraphrasing them, in an effort to improve understanding on the part of the

The third aspect of this variable has to do with a concern with language itself in the course of teaching. indent (To what extent did teachers produce content relevant English which was audible to most of the class?) The intent here was to get at the differences we observed among teachers, not just in the amount of English they produced in class, but in the uses to which they put it. By "content

relevant English", we had in mind its use in providing information about the content of instruction, giving explanations, and the like rather than in giving instructions or in its ordinary social uses. Students who are just learning English need to hear how it is used by native speakers for dealing with a full range of communicative functions in an instructional setting. How do English speakers use English for explaining, describing, narrating, or instructing? How do they ask questions, or make requests of one another?

Other rating dimensions related to a concern with language were these:

- (1) To what extent did teachers attempt to promote vocabulary development in the course of their teaching (for example, did they explain the meanings or uses of words encountered in lessons?); and,
- (2) How frequently did they draw attention to language itself in activities where language was the means rather than the object of instruction?

In the ratings that went into the effective instruction variable, we were dealing in part with the academic appropriateness of what teachers were doing in their classes, and in part, with the appropriateness of the language they used in the course of their teaching. There is a tendency on the part of many teachers who work with language minority students to aim much too low in the level of the content they present to students, and in the language they use in teaching them. They stick with plain, unadorned, and at times, even

oversimplified presentations of the materials to be learned. Hence, they may avoid teaching subjects they believe their students will have difficulty understanding, or to withhold enrichment of any kind in their teaching on the grounds that such students have to be taught the basics before they are given anything else. This kind of view generally led to a strong emphasis on the development of basic skills across the classes we have studied, although some teachers focused on much lower level basic skills than did others. (That variation is captured in the rating variable, "Low Skill Teaching", which is described below.)

A few teachers erred in the other direction; they tended to teach at levels that were appropriate for the higher achieving bilingual and English speaking students in their classes, but not for the LEP students who lacked the language skills and the prior experiences needed for dealing with the materials as presented. One of the teachers who was not rated particularly high on this variable actually had one of the best overall programs of instruction in our sample in terms of enrichment, level of instruction, and the like. Several times a week, for example, she conducted "art appreciation" lessons in which she showed slides of paintings or sculpture, and then led the class in discussions of characteristics and meanings of those works of art. Hence, she was rated high on enrichment in her program, and relatively low on "low skill teaching", as one might expect. The language used by this teacher in her instructional program was mature and rich; she gave the children opportunities to hear, if not learn to use, words such as "surrealism" and "impressionist". She was thus rated high on

her use of content-relevant English. However, when the rating dimensions focused on the question of the extent to which adjustments were made in the presentation of the material depending on evidence provided by the students as to whether they were following what was being taught or not, then this teacher was rated lower. While she made use of slides and prints in these lessons, much of what was to be learned was conveyed linguistically. The teacher pointed out aspects of the paintings to be noted by the students, she compared them with others that the students had seen earlier, and she characterized the various styles represented by individual paintings, but this was done entirely in lecture style. She spoke rapidly, and seldom slowed down or made any adjustments in her presentation based on student feedback; she depended on everyone being able to keep up with her, and indeed the majority of the students in the class appeared to be able to do just that. The LEP students, however, were generally not able to keep up. The program in this class might have been good for everyone, had some linguistic accommodations been made for the sake of those who needed be shown what aspects of the paintings were being talked at each point along the way, or who needed a slightly slower paced presentation in order to make out what was being said. The LEP students' found it difficult to follow the lessons, not only because the language used in the lessons was unfamiliar or because the materials were difficult, but because the students had no way of figuring out what the teacher was saying about the slides.

There were teachers in our sample who were able to teach at a fairly high level and to make use of fairly complex and rich language

in their teaching, but nevertheless managed to present their materials in ways that allowed their LEP students to participate in lessons, and to get something out of them even though they did not understand everything that was going on. Our observations have led us to conclude that it is not enough simply to provide LEP students with opportunities to hear English as it is spoken by teachers and classmates in school, it is also necessary to offer them the means for figuring out what is being said, and for discovering what principles guide the use of that language. These teachers (they were among the highest rated on the Good Teaching variable) gave us reason to believe that it is possible to provide language minority students with an enriched program of study, and to expose them to a rich and varied use of the school language from which they can derive meaning even before they are fully proficient in English. These teachers emphasized the development of higher order knowledge and skills in every subject area. Whether the subject was reading, mathematics, spelling or social studies, they were concerned with helping the students understand and interpret what they were learning. These teachers put a great deal of effort into the development of vocabulary in building the students' comprehension skills in connection with all subjects. They spent a lot of time discussing the meanings of words and texts, and making sure the students understood what they were reading or hearing. When students gave any indication that they did not understand (either because of the language or the content) these teachers would repeat, or present the materials in some other way, sometimes paraphrasing them, but often enough demonstrating or illustrating the point non-linguistically as well.

Our observations reveal that such efforts generally paid off, both in language gains for LEP students (to be discussed in Chapter 4), and in their academic development as well. The students in the classes taught by teachers who were rated the highest on this dimension profitted from their teachers' efforts. One of these was a teacher who featured literature in his rather than any single aspect of it); two teachers had mathematics programs that were focused on developing an understanding of mathematics operations and concepts, their efforts resulting in unusual gains in math achievement for their classes (one of these was a third grade Chinese bilingual class (3C2), the other was a third grade Hispanic English class (3S-)); several teachers had language arts programs that promoted writing as a form of communication, and their students developed unusual skill and enthusiasm for writing.

The ratings on this variable ranged from 6.65 to 1.50, with the median rating being just above the mid point in the 1 to 7 scale at 3.52, so it would appear that our teachers ran the full gamut in quality. The question as to just how this variable affects language and academic development should be obvious. Instructional effectiveness depends partly on how teachers present the materials to be learned, and partly on what they emphasize in their teaching. The varied use of teaching models, the tailoring of instructional activities for the sake of students, and the focus on the teaching of higher level skills are instructional practices that we assume improves academic development in students. Similarly, a commitment to successful communication, a continuing effort to develop vocabulary, and a focus on



language use are instructional concerns that surely promote both academic development and the development of language skills in students. Teachers who are concerned with comprehension will find ways to help their LEP students understand what is being taught, even when the materials are difficult.

#### 3.2.1.7. Low Skill Teaching

This variable consists of a single instructional characteristic, namely one in which teachers were rated on the extent to which they tended to focus on the teaching of "mechanics", lower level skills, basic operations or simple facts. As pointed out earlier in the discussion of the Good Teaching variable which included ratings on the opposite practice (namely, focusing on the development of higher level skills in instruction, such as those involved in comprehension and interpretation, or ones required for the integration of operations), most of the teachers in the sample (that is, all but seven) tended to emphasize the development of basic skills almost exclusively, and provided relatively little enrichment in their programs. Few of others ever went beyond a basic coverage of the curriculum. Their focus on teaching the basic skills of school to their students may not have been misplaced, given the fact that so many of them had to contend with learning problems stemming from experiential deficits as well as language differences. Nevertheless, the teachers in the sample did vary in the extent to which they worked at developing anything beyond the most mechanical level of control over such basic skills. A concern with the development of low level skills led teachers to



emphasize accurate decoding rather than comprehension in their reading programs, on correct spelling and handwriting rather than learning how to use words or composing texts in their language arts programs, on learning the mechanics of computation rather than on understanding arithmetic operations in their mathematics program, and on memorization and rote learning rather than on figuring out what things mean, or how they work in other areas of the curriculum.

Some brief descriptions of practices that are focused on the development of low level mechanical skills will show how such an instructional emphasis can influence academic development and language learning. Let us consider ways of conducting, say, reading instruction that reflect this kind of bias.

- (1) Teacher has students read in round-robin fashion, each one in the reading group reading aloud a passage from the reader. Teacher corrects reading errors, and occasionally provides definitions for specific words in the text. She/he may ask the students to "look up" the words they don't know in a dictionary, and asks them to read the definitions they find to the rest of the group. Discussion of the text itself is limited pretty much to factual matters (e.g., "Who did Billy see coming down the street?" "What does
- (2) Teacher goes over the materials to be covered for the day, focusing on the procedures to be followed in completing the day's assignment. Students are given assignments (sections to read, workbook pages to complete, or supplemental materials to work on)

which are to be completed independently. The remainder of the reading period is spent with the students working individually, and without direct guidance from the teacher. The teacher monitors the students as they work, but unless they have specific problems on which help is needed, the teacher does not provide any additional "instruction" during the period.

- (3) Teacher goes over the workbook assignment from the previous period by asking the students by turn to give their answer to the next item on the page. If the answer is correct, the lesson continues. If the answer is wrong the teacher either tries to elicit the correct response from that student, or from someone else. Few comments are made concerning correct responses, and only rarely are explanations provided, even when students respond incorrectly.

It should be emphasized that the practices described here are only samples; no one of them by itself is indicative of a teacher's overall focus in teaching, since teachers generally work at a variety of levels in their teaching. That focus can be seen only in relation to the total instructional program. Our ratings on this variable were made in consideration of the overall balance maintained in programs between low and high levels of instruction. Much of the instruction that we observed in our sample classrooms was directed at the development of basic skills, as noted earlier. Our ratings on this variable reflect that observation: the range (on a scale of 1 to 7) was 4.00 to 7.00, with 11 of the 19 teachers rated at 5.00 or above. The eight who received ratings below 5.00 were the teachers described earlier as

having included some enrichment activities or activities that promoted the development of higher level skills in their instructional programs, which otherwise were directed towards the teaching of basic skills. The other eleven stressed the development of low rather than high level skills with the extent to which they departed from an exclusive concern with low level scores reflected in how much below 7 they were rated.

This variable generally correlated negatively with the "Good Language Teaching", but it should not be concluded that "Low Skill Teaching" necessarily means ineffective teaching. In fact, the teacher who earned the highest rating on this rating (7.00) was, from all evidence, quite effective in what she did. The students in her class (3C6) made respectable gains in academic achievement as shown by gains in CTBS scores; our observations of the classroom indicate that the instructional environment maintained by this teacher was one that promoted good learning habits and behavior. Her class received the second highest rating on the extent to which students appeared to be "on-task" and engaged in learning activities (see variable #2 above).

This variable is more likely to affect academic development than language development, since it deals with the content of instruction rather than with how it is conveyed linguistically. How much influence it might have, however, is a question that cannot be answered easily since so many factors are involved in learning.

### 3.2.1.8. Language Teaching and Feedback

This variable combines ratings from 4 aspects of teachers' instructional programs, 2 of them obviously related, and 2 of them less obviously so. The related aspects are these: (a) Teacher frequently plans and carries out instruction concerning the structural aspects of English; and (b) Teacher frequently promotes the acquisition of metalinguistic concepts, e.g., verb, sentence, etc. Forming a close cluster with them were the following: (a) Children are frequently given immediate feedback in oral production situations; and (b) Teacher frequently has children participating in whole class activities, not just seated that way. The clustering of this eclectic grouping of variables can be explained in this way: The structural aspects of English, when they are taught at all, tend to be covered during the time devoted to "language arts" instruction in most classes. In some classes, language arts instruction consisted almost entirely of workbook activities: children were assigned exercises to complete in their workbooks, lists of spelling words to memorize, and occasionally, short essays to compose. Many of these exercises were concerned with the "structural aspects" of English, for example, suffixation, verb morphology, pronominalization and the like. Teachers usually went over the procedures for completing these exercises with students, but they differed as to whether or not they provided instruction about the structural meanings or functions of such grammatical forms and processes. Those who did, tended to emphasize it a lot, and hence were more likely to be calling attention to it throughout the school day.

How immediate feedback on oral production relates to this is somewhat more subtle. Teachers differed a lot in how they saw their roles. Some were more "traditional", and believed that certain subjects, grammar being one of them, have to be taught if they are to be learned at all. We found that the teachers who emphasized grammar in their programs were generally those who did a lot of "teacher-directed" instruction. (This combined variable correlated .595 (sig. .012) with amount of teacher directed instruction.) In most classes, when there was actual instruction in English grammar, it was done as whole class instruction. During such activities, students were frequently called on to participate orally, and on those occasions, they were especially likely to get feedback on the form as well as the substance of their verbal contributions. Not all teachers did this kind of instruction, as we shall see when the instructional organization variables of teacher directed activities versus independent seatwork activities are discussed. About a half of our teachers regarded themselves as "facilitators" or consultants in learning. They made assignments, went over procedures for completing assignments, and they monitored the students while they worked, providing assistance and instruction to individuals or to the class, as the need for help arose. Such teachers conducted relatively few group or whole class lessons per se, during which students might be called on to participate orally.

The ratings on this combined variable ranged from 1.50 to 5.54 (on the scale of 1 to 7), with the median at 3.56. It would appear that although there was little instructional emphasis on the grammati-

cal aspects of English or feedback given to students on their oral productions in many of our classes. In only 5 classes (those rated at 4.75 and above, namely 3C1, 3C3, 3C4, 3C5, and 3S5), did teachers appear to regard it as a subject that deserved major instructional attention and effort from them. Not surprisingly, their classes were among the top gainers in z-scores on the Language Arts Subtest of the CTBS.

#### 3.2.1.9. Individualized Help

This variable consists of ratings on just one aspect of teaching, that is, on the frequency with which students are provided with instructional assistance, clarification or tutoring by teachers on an individual basis. In many classes, teacher assistants provide much of the individual help that is given to students. One might expect that the amount of such help that teachers themselves provide students would be inversely related to the amount of teacher directed instruction they engage in, and directly related with the amount of time they have students engaged in independent seatwork activities. One of the reasons some teachers seem to prefer independent seatwork for students over group or whole class instruction is that it frees them to give individualized attention to those students who need the most help. However, the view that teachers can provide more of the specially tailored instruction that is the most useful to students if they are not tied up in group instruction for much of the day was generally not supported by our observations. Quite the opposite, we found a generally positive relationship in classrooms between amount of teacher

directed instruction and individualized help, and a negative relationship between it and amount of independent seatwork, although in each case, the relationships approached, but were not quite significant. Ratings on this variable ranged from 2.00 to 6.00, with a median of 4.50, indicating that in general, most of the teachers found time to provide a fair amount of such help. The teacher who was the highest rated on this variable, was also the one who did the most teaching, the three who were rated the lowest were among the teachers who did the least formal instruction. It would appear that the same teachers who did a lot of formal teaching also managed to provide a considerable amount of individualized help to students. Those who relied heavily on independent learning in which students were given assignments did not always provide as much individual help as one might expect they would.

The help given to LEP students on an individual basis can be essential to their academic and language development. Until LEP students become quite proficient in English, they will have difficulty comprehending fully the explanations or instructions they receive in group lessons, since the language used by teachers in conveying such information is seldom comprehensible or transparent enough to allow them to figure things out for themselves easily. Teachers who are especially skilled in working with LEP students can, by combining clear simple language with demonstrations and illustrations, manage to successfully teach their students much of what they are to get out a lesson. This is most easily done when all or the participants in the lesson are more or less equally proficient in the language, and are at



the same level in the learning proficiency as well. In most cases, however, students can be grouped by level of learning proficiency, but not language proficiency. Hence LEP students may find themselves grouped with classmates who are much more proficient in English than they are. Teachers then have a much harder time providing the linguistic help needed by the LEP students. This is not to say that group instruction is not an appropriate way to teach them; quite the contrary, in most cases, it constitutes the most efficient way of providing LEP students with the linguistic experiences that allow them to learn English. Such group learning experiences are invaluable since they provide LEP students with opportunities to hear how the language they are learning is used by competent speakers. But as for content learning, students who are especially limited in English may get little more than the gist out of a group lesson.

The language used in teaching LEP students must be tailored to their level of understanding, and has to be accompanied by demonstrations, enactments and other non-verbal cues that illustrate the points being made verbally. The less proficient students are in the language of instruction, the more they need of such help; even with help, however, they are not likely to get any kind of detailed understanding of the content being taught. The problem is that the level of linguistic modifications that allow low English proficiency students to figure out what is being said are not easily managed in group instruction, especially when the learners in the group vary in language proficiency. What is appropriate for some students may not be for the others. Ordinarily, adjustments are based on feedback provided by the



learners as to whether they understand what is being said or not. When they appear to understand, then teachers can continue with the lesson. When students appear not to understand, then teachers repeat, rephrase, or try other means of communicating the information being taught. For that reason, help given on an individual basis is essential to learning. In working with individual students, teachers can determine how much help is needed, and they can tailor the presentation in ways that benefit the student most.

#### 3.2.1.10. Informative Help on Oral Production

This variable consists of three characteristics on which teachers were rated:

- (1) the extent to which they provided students with informative, diagnostic or explanatory feedback in oral production situations;
- (2) the frequency with which teachers monitored children's work in progress; and
- (3) the frequency which which teachers allow or request target children to provide additional responses when initial ones are incorrect.

Not surprisingly, this variable correlates with variables 8 and 9, both of which dealt with aspects of feedback provided by teachers on the oral production of students. The present variable concerns the quality and timing of feedback given in connection with student performance. Considerable variation was observed among teachers in the

kind of feedback they gave students on oral participation in lessons, or on work they were doing. That variation is reflected in our composite ratings for this variable; they ranged from 1.67 to 6.00 with a median rating of 2.67. In the lowest rated classrooms (1.67 to 2.17), the following practices were quite typical: during group lessons, teacher lets students know if their responses to elicitation questions are correct or not, but provides no hint as to why given responses are judged to be correct or incorrect; typically, when students give incorrect responses, the teacher occasionally give them another chance to redeem themselves, but more often than not, will call on someone else to supply the "correct" response; during seatwork periods, teacher keeps the students "on-task" as they work on their assignments, reprimanding them when they appear not to be working, answering questions about the procedures when they are raised, but otherwise leaves the students to work on their own.

In contrast, the following practices were observed in the higher rated classrooms: the teacher frequently asks students to tell the group how they arrived at a particular response, and then elicits from other students reasons why they think the response is correct or not (the two top rated teachers on this variable frequently summarize the reasons that are offered, thus providing a restatement of the point being taught); when students give incorrect responses, the teacher gets the student to rethink the question, and then offers another opportunity to get it right; the teacher observes students while they are working on seatwork assignments and checks to see whether or not they understand what they are supposed to be learning (sometimes by

asking individuals to describe the procedures they are following, or by providing additional explanations when needed.)

This variable is concerned with instructional practices that are an important aspect of teaching. Teaching can be seen as consisting of a number of operations: a major one consists of the presentation of the materials to be learned, whether in the form of written texts, or in the form of oral presentations; a secondary one in which students are guided through an examination or consideration of those materials whether in the form of a teacher directed discussion, or in the form of written discussions; and finally one consisting of exercises in which students are asked to apply what they have been taught to problems or new situations. Instructional success depends on what is done at each step. In the first, new materials are presented to the students; success depends on how well the teacher or textbook writer has judged what the learners will need to be told in order to make sense of the content, and on how the materials are organized and presented. In the second operation, instruction involves checking to determine what the students have understood of the materials that have been presented, correcting misapprehensions and mislearnings, and consolidating newly acquired knowledge into previously learned structures of knowledge: success depends in part on how the discussion is set up (how the activity itself is structured, the kind of questions asked, the way turns are allocated, etc.), and even more important, on the way teachers deal with student contributions to the discussion. When teachers provide explanatory or informative feedback, they are in fact providing additional instruction in ways that may be more meaningful

to the students than are their formal presentations since this added instruction is builds on things that the students have already learned, whether correctly or not. When teachers don't provide this kind of added information, students are left to figure out for themselves why particular responses are acceptable while others are not. Some students can do this, but others can not. In the third operation, instruction involves the assignment of exercises which have students demonstrating their understanding of the materials, or practicing the skills they have been taught. Successful instruction depends on students being provided with guidance in the form of corrections, explanations, additional information, modeling of procedures, and reinforcement. In those classrooms in which student work was not monitored while in progress, misunderstandings or mislearnings were frequently not discovered until the work was graded.

The relevance of this instructional variable for content learning is obvious; it is also relevant for language learning. What others say in response to learners' attempts at communication in the target language can be the most useful and important kind of linguistic feedback and input they can be given. By the way others respond, they can judge whether or not they have successfully communicated what they had to say, and they are given an opportunity to hear what other speakers of the language might say in response. When teachers are helpful and informative in giving LEP students feedback whether on their verbal contributions or on their work they are also providing them with useful and informative linguistic input on which they can further their learning of the new language.

### 3.2.1.11. Feedback on Written Work

This variable consists of ratings on one feature of teaching, namely, the extent to which teachers provide students with informative, diagnostic or explanatory feedback on written assignments or homework. As in the previous variable (#10), the concern here is with frequency and quality of the feedback given to children on their work, this time on written work rather than on oral productions. Here again, teachers vary greatly in the feedback they gave students on their work. Ratings ranged from 1.00 to 6.50. 2 of the 19 teachers involved in the study could not even be rated since we could not determine what kind of feedback they gave students on written assignments. Well over half of those we could rate (that is, 9 of 17) were given ratings of 1.00 or 2.00. In some of the lowest rated classes, teachers were often very late in grading and returning written assignments to students. In those classes, whatever feedback was given to students was of limited usefulness to them since so much time had passed before their papers were returned to them that they had forgotten the point of the assignment. In the other classes, written work was graded and returned soon enough, but all too often, there was little in the way of informative or diagnostic feedback given to the students. Errors were marked and the work was graded, but students were given no other explanation or diagnostic information on them. A common practice for teachers was to have students correct their own or each other's papers. After having students trade papers, teachers would call off the correct answers which the students would mark, or they might call on students to give read the answers to the items in

turn. Once graded, these papers were sometimes collected and the scores recorded, but often enough they were simply handed back to the students. Students received no additional feedback on their work unless they went to the teacher to ask for explanations about the grades they had been given, something that many of the children found hard to do. At the other extreme were the few teachers who routinely provided a great deal of informative feedback to students on their written work. The highest rated teacher, for example, had a 2 or 3 minute individual conference each day with every student in his fifth grade concerning the written work they had done the prior day. The remarks we observed this teacher making to students on their work indicated that he had apparently gone over their work rather carefully, and that he frequently gave students individual assignments based on his assessments of prior work. Another teacher who was highly rated on this variable frequently selected student papers to discuss with the entire class. The papers selected for discussion by this third grade teacher appeared to be ones that contained common mistakes, or were exemplary ones.

This variable is one that is clearly relevant to the development of written language skills for all students, and may also be relevant for academic learning as well.

### 3.2.1.12. Extended Responses Required and Modeled

This variable was derived from ratings on three separate teaching characteristics:

- (1) The frequency with which teachers ask questions that require extended oral responses (that is, that call for more than a single word or short phrasal response);
- (2) The frequency with which teachers require target students to compose extended written texts; and,
- (3) The extent to which the teacher's language could be considered a "good language model", (that is, can be characterized as using rich, elaborated language, appropriate vocabulary, structurally well-formed sentences, clear articulation, accurate spelling, etc.

Combined ratings for the 19 teachers ranged from 1.33 to 6.33 on this variable, with a median of 2.99. The lowest rated teachers were ones who almost invariably structured "discussions" in ways that did not require students to do anything more than supply short answers to elicitation questions. The questions they ask are call for specific answers, for example: "Who can tell me what the past tense of 'hold' is?" or, "What do we call plants that grown in an aquarium?" These teachers seldom asked questions that invited any real discussion such as we observed in classrooms that we rated higher on this variable. Similarly, the teachers who were rated low rarely asked their students to compose extended texts as other teachers did. One of the lowest rated teachers had her third grade class copy a short essay that she wrote on the board each day, but as far as we could tell, she never once during the year had her students composing longer than a sentence on their own. The purpose of the daily copying exercise was never



clear to us (nor to her students for that matter), although it sometimes occupied much of the daily period that was assigned to "language arts". Another low rated teacher had her students writing in English every day, but they were never required to produce texts that were longer than a sentence.. Her practice was to give the students a list of English words (for example, "silk", "nest", "strong", etc.) which they were to use in sentences, and they did: "This is silk", "This is a nest", "This is strong", etc.

In contrast, the highest rated teachers were ones who required frequent compositions, letters, journal entries, and the like. The highest rated teacher had the students making daily entries in their journals. They were invited to write down their most private thoughts, and they did even when those thoughts were about the teacher. One student, who felt that he had been unjustly reprimanded by the teacher, vented his anger in his journal, knowing that it would be read by the target of his hostility. The teacher did read it, and returned it to the student, with a few written comments on the organization and structure of the entry. Another teacher had her students doing a lot of letter writing, mostly to local and national leaders. One assignment this teacher gave her third grade class was to write to President Reagan to express concerns that the class had raised during a social studies discussion about hunger in America. During the discussion, the students who were themselves the children of newly settled migrant farmworkers had much to say about being poor and hungry--everyone seemed to know someone who used to be so poor they didn't have anything to eat. This teacher led the discussion adroitly, and



allowed her third graders to share their experiences with one another. The letter writing experience gave them an opportunity to practice communicating their thoughts in writing to someone they thought should be informed about the problem.

Interestingly, our observations showed that the teachers who gave their students the greatest number of opportunities to develop and exercise oral and written language skills were generally the same teachers who were the best language models for them. The teacher mentioned above as being the highest rated on this combined variable lavished linguistic attention on his students throughout the day. Because many of the children in his classroom were quite limited in English proficiency (beside the many LEP students in this class, there were also several newly arrived non-English speakers), the language used by this teacher during morning sessions (when reading, math and social studies were taught) tended to be carefully modified and relatively simple. Nevertheless, compared to many teachers who limit their speech in talking to limited English speakers to short, stilted, unnatural phrases, this one was inclined to use expressions that were entirely idiomatic, although he spoke without the flourishes and embellishments of his more natural style.

The language he used in talking to the class during the afternoons was markedly different. The afternoon session which began each day with a period this teacher dubbed "Super-silent Reading" was devoted to language arts--literature (fiction and poetry daily), journal writing, sharing, oral language development. During this part of the day, the teacher seemed to shed the linguistic restraints that

were necessitated by the situation, and would use a rich and varied set of words and structures in communicating with his class. He greeted the students (waiting eagerly outside the classroom door for the afternoon session to begin) with a special saying or ditty that related to the theme of the day's language arts lesson. On one of the days we observed him, for the (n)th time (it was apparently a class favorite) he greeted the students with a broad grin, an ostentatious bow, and the old saying, "Come into my parlor, said the spider to the fly!" The ensuing lesson that day involved a discussion of how the world would appear from the perspective of a spider sitting in its web high above everything. During this period, the students were invited to imagine themselves as a spider on the ceiling of their choice, and then to tell the class (and later to write an essay) about what they had seen.

In contrast to the teachers who were rated highly on this variable, the ones who least frequently gave students opportunities to produce extended oral and written language responses tended to be somewhat taciturn and sparing in their own speech. One of the lowest rated of the teachers on this characteristic was someone who rarely gave any explanations, and in fact rarely talked in class. In a tally of talk versus silence, this teacher was found to be speaking just 14% of the time, and silent 86% of the time. The top rated teacher was speaking 54% of the time, and silent just 46%.

This variable is concerned with the quality of the language students are hearing and practicing during the course of the school day, and as such it is clearly relevant for language learning. The

development of mature language skills whether in oral or written form depends on exposure and practice. But the quality and quantity of language use in the classroom serves an important function beyond that of providing opportunities to hear and use the new language. One of the ways in which children develop mature thinking skills being engaged regularly in discourse which allows them to observe the way in which others deal with ideas. By listening to a teacher who is skilled in presenting information or in explaining ideas, children can learn how to organize information, and to lay out reasoned arguments. When they participate actively in these discussions, children get practice in formulating and presenting their own thinking to others. The aim of this kind of practice is clarity in communication, but the ultimate payoff for learners is clarity in thinking.

#### 3.2.1.13. Opportunities for Oral Participation

This variable is based on ratings of the extent to which teachers provided opportunities for all of the children in their classes to participate orally in instructional activities, either by calling on them or by opening the floor to volunteers. Ratings ranged from 2.00 to 6.75, with a high median of 4.25 indicating that in most cases, turns for oral participation were fairly well distributed. In assessing this variable we focused on oral participation in class discussions, irrespective of the language in which these discussions were conducted. In Section 3.2.2, the focus was on opportunities for oral participation in English. Although the two are highly correlated, the teachers who were rated high on the present variable were not

necessarily as high when opportunities for participation in English run activities were considered. Some teachers tended to call on LEP students when the instructional activities were conducted partly in the L1 (i.e., bilingually) of the students, but not when they were in English only. The teachers who were rated low on this variable were ones who tended not to use systematic turn-allocation procedures, or were inclined to favor only the most eager students with turns.

#### 3.2.1.14. Written Responses Required

This last variable is based on ratings of the extent to which teachers required written work from students as a regular part of instructional activities. Ratings were generally quite high on this item, ranging from 2.00 to 6.67 with a median of 5.75, indicating that in most cases, teachers did require written responses from students on a regular basis. The type of written responses children were called on to produce varied considerably as noted earlier in connection with Instructional Variable #12 when the question of whether or not teachers were requiring extended oral or written responses was discussed. In the present ratings, we were concerned not with the kind of written responses required, but simply with whether they were required at all. The three lowest rated teachers on this variable (2.00 to 3.00) seldom required their students to produce any written responses beyond those called for in workbook exercises. The aforementioned teacher who had her students copy a 4 or 5 sentence essay from the blackboard each day as part of their language arts experience is one of them. Aside from this one writing task, the students in her class did no other writing

except as required in their reading and spelling workbooks. The students in the other two low rated classes were required to do a little writing occasionally, but it was not regular enough to add up to much use.

In contrast, the highest rated teachers frequently gave written assignments to students in connection with all content areas. A third grade teacher, for example, had his students creating word problems for addition and subtraction problems. Another teacher had students writing down the words of their favorite songs from memory. Yet another teacher had students listing in their notebooks words they were seeing or hearing for the first time.

### 3.2.2. Instructional Language Use Variables

The set of classroom variables characterized as Instructional Practices in the previous section focuses on the development of academic language skills that are dependent on formal instruction: reading, writing, spelling, "grammar", etc. Some of them are also relevant to the development of second language skills which have to be learned, but cannot be taught, per se. These include the abstract rules of grammar (in the linguist's sense of "grammar"), meaning and usage that enable the learners to speak and understand the language, and to read and write as well. According to current linguistic theories, the deepest and most critical kind of grammatical knowledge, that which undergirds language ability and proficiency, is acquired quite unconsciously, and remains pretty much below the level of aware-

ness in those who know the language. This knowledge consists of an enormously complex and abstract system of rules that govern, among other things, the sound and meaning relations in the language, the arrangement of forms into structures, and the meanings and functions that particular forms and structures take on in different contexts. At present, the linguistic knowledge that learners have to acquire in order to speak and understand any language at all (including English) is not well-defined or understood either by linguists who specialize in the study of linguistic knowledge and language learning behavior, or by educators who specialize in the teaching of language. This is @U(not) to say, of course, that language educators know nothing about language learning, nor that language teaching is a futile enterprise. Not at all. Much is known about the "surface aspects" of many languages: their sound systems, their morphological forms (e.g., words and other meaning bearing elements), their structural patterns and their pragmatic uses. These can be, and are taught, to second language learners through some formal programs of language instruction. The English as a second-language (ESL) programs that were available in some of our sites generally aimed at providing LEP students with formal instruction on these aspects of English.

What can not be taught is the system of abstract and not well-understood rules which give the surface features of language their form, meaning, and function, and which regulate usage. Learners have to acquire these all-important aspects of language, pretty much without formal instruction. That does not mean that they can learn it entirely on their own, however. They have to have the help and colla-

boration of people who already speak the language in order to discover how the language is structured, and how it works. Speakers of the language play a crucial role in language learning by providing learners with "linguistic input", speech samples produced in the course of interacting with learners which eventually permit them to discover and acquire the same set of rules the speakers have. According to theorists, language samples contain evidence of the rules by which they were originally composed and used. By analyzing such samples, it is possible to discover the underlying knowledge involved in generating them. This is a greatly oversimplified account of what language theorists believe, of course. Nevertheless, their view generally is that learners acquire language by the process of analyzing (largely at an unconscious level) the linguistic data that speakers provide them in the form of speech samples. Their analyses eventually result in the discovery of much of the system of abstract grammatical rules that speakers of the language possess. In the process of sorting these rules out, the learners acquire them, and in doing that, they acquire the language itself. Basically, any competent speaker of the language can provide the help needed by its learners. One does not need to be an expert in language learning, or a teacher even, to help in the learning of a language. One simply has to be a competent speaker of the language, and be willing to use it while interacting with those who don't know the language, but need or want to learn it. Parents and other family members are, without question, the best providers of such assistance, judging from their success in helping babies learn language. They almost always figure out what it takes to help new members of the family learn the language of the home, no



matter what that language happens to be. Much of this happens when parents do what comes naturally to them; only rarely are they aware of the part they play in language learning, or of what is involved in the process itself.

And in the case of a second language as English happens to be for many children in our society, the help needed for language learning comes from classmates and friends and teachers at school. English speaking classmates are very important, but there aren't always enough of them to go around, and they are sometimes not interested in interacting with classmates who do not know English already. Thus, teachers play a major role in providing LEP students with exposure to English and help in learning it as a second language. They make it possible for all of the students to get access to the language to be learned, and they can also provide students with exposure to precisely the kind of language that they have to learn--namely the structures and forms that are used in academic settings and materials. The language that teachers use in formal lessons and in other types of instructional activities can serve as input for the language learning that the LEP students have to do on their own. The language produced by speakers of the target language becomes input when it meets certain conditions. First, it must be produced with the learners' needs and linguistic limitations in mind. Speakers, recognizing the fact that the learners are less than fully proficient in the target language make adjustments in the form and content and content in communicating with them. These adjustments generally have the effect of making the language used somewhat easier to understand. Researchers who study



the language which speakers produce for learners have found that it tends to be structurally simpler, more repetitive, and more "regular" than ordinary language. The adjustments made by speakers for the sake of learners are not always helpful to them; in talking to learners, speakers sometimes use "foreigner talk" forms, language that has been made ungrammatical through reductions and simplifications, in the mistaken belief that simplifications rather than simpler usages will make things easier for learners to understand. More often than not, however, when speakers make adjustments in their speech in the interest of communication the result is helpful to the learners. Speakers often accompany what they say with gestures, demonstrations, and enactments in trying to communicate with learners. These speech accompaniments can provide a certain degree of redundancy, which can help the learner figure out what people are saying. Non-verbal cues are an important source of information for learners during the initial stages of language learning especially.

In this section, a second set of instructional variables is described, this one consisting of features of instructional language use in classrooms that enable it to serve as "linguistic input". There is some overlap between the two sets of instructional features. For example, the practice of using repetition, explanations, paraphrase, and exemplification when students appear not to understand is treated in both sets of variables. However, in the first set of ratings, we considered such adjustments irrespective of language. In the case of the bilingual teachers, ratings reflected their language practices in the L1 and in English. In the present set of instructional

language features, ratings were based solely on the English used by the teachers. The purpose of this set of ratings based only on the teachers' use of English for instructional purposes was to determine to what extent their patterns of language use influenced the LEP students' of English language skills. Two types of data were used in assessing the instructional language variables. The first was supplied by the Research Assistants who had spent the school year conducting observations and testing students in each of the seventeen classrooms. Each RA completed a debriefing form at the end of the year in which they assessed the classroom on a large number of instructional variables (See Appendix D). Among them were a series of detailed questions concerning the patterns of instructional language usage the RA had observed over the year. The purpose of this debriefing form was to collect the RA's impressions that could later be compared to the more careful analyses that we would be doing on the basis of the video and audio recorded data that had collected during the year. The evaluation began, however, with the ratings that the RA's had provided us of their general impressions of the extent to which the teacher exhibited the following behaviors and strategies:

Second language input:

1. Language tutoring (e.g., modeling answers, patterning answers, labeling, expansions, language explanations, corrections of child utterances, etc.
2. Eliciting language (e.g., asking questions, prompting with slots, prompting with models, calling on students to talk.
3. Formatting statements (Instructional directives, announcements, structural comments)
4. Content taught verbally (providing information,

explanations, etc.

5. Content taught nonverbally (demonstrations, illustrations, enactments, etc.)
6. Modifications of previous utterances (upgrading, paraphrasing, downgrading, repeating with expansions, repeating with simplifications, etc.)}

Teacher feedback and response:

1. Evaluative feedback to answer or utterances (e.g., evaluating or correcting)
2. Confirming, acknowledging feedback (teacher lets students know whether or not they have communicated successfully)
3. No feedback (e.g., no response, or ignores student)
4. Request for feedback or confirmation (teacher checks to see whether or not students understand)
5. Rescue in L1 (Teacher translates or prompts in L1 when students appear not to understand)
6. Rescue in L2 (Teacher answers for child or models response in : when child fails to respond)

Social control and response:

1. Behavioral directives (including requests for attention)
2. Evaluating behavior (reprimands or praise)
3. Response to compliance with directives
4. Response to rejection of directives

Our research assistants were directed to use a rough scale beginning with 0 (for never) to 4 (for very frequently) on this checklist. Later, and without reference to this earlier rating form, they prepared check sheets using the same list of teaching behaviors along with a list of student behaviors based on the video tapes that had been collected, segment by segment. On this check sheet (which is

attached as Appendix A), the R.A.'s merely checked each item if there was any evidence of it in a given segment of tape. These checksheets were not tallies of teaching behaviors, they were merely indications that the checked behaviors had occurred at least once in a given segment. These checksheets served as guides for us as we went through the taped materials to do our ratings of teaching behaviors.

A set of 38 descriptors of aspects of teacher's instructional language use, and of structural or organizational features that affected the number and kinds of opportunities available to LEP students to hear and practice using English in the seventeen classrooms was used for deriving this set of data. These ratings were based on the audio and video recorded data that we had collected in the classroom over the course of the year, and based on a set of observations that the PI conducted in the classrooms during the study year. The rating form is included here so the reader can see what was included in this set of instructional features.

Figure 3.1  
Rating of Instructional Language Use Relevant to L2 Development

|   | Rating<br>[1-7/NA] | Comment |
|---|--------------------|---------|
| <u>Instructional language features</u><br>[i.e., the language used by teachers in formal lessons and during other teacher directed instructional activities conducted in English]:              |                    |         |
| 01 Teacher produces language in presenting lessons and in leading discussions which, from the perspective of the LEP students, seems to be clear, relevant, coherent and easy enough to follow. | ----               |         |

- 02 Teacher uses structures that seem to be at appropriate levels, given the language level of the LEP students involved in the activity. ----
- 03 Teacher uses vocabulary that seems to be at appropriate levels, given the language level of the LEP students involved in the activity. (N.B. But since vocabulary choice depends in part on the subject matter being taught and in part on the language level of the students, lexical choice has to be judged both in the context of specific lessons and also from the perspective of the students. The words that are used should be appropriate and reasonably precise, however.) ----
- 04 Adjustments in the level of structural or lexical usage appear to be based on feedback provided by students as to whether or not they understand what the teacher is saying. Adjustments are made upward or downward as needed. ----
- 05 Teacher makes adjustments in the level of the content being presented as required, based on student feedback. Adjustments are made upward or downward as needed. ----
- 06 There is evidence of message redundancy in the presentation of lessons, by use of repetition and paraphrase. (That is, teacher often says things in more than one way to get her/his point across to the student.) ----
- 07 The language used in lessons tends to be high in situational anchoring. (That is, the language used by the teacher is often keyed precisely to what she/he is doing, or to the activity at hand.) ----
- 08 Teacher makes frequent use of enactment, demonstration, pictures and other realia in the course of presenting lessons to LEP students. ----
- 09 Teacher often relates new or unfamiliar language, information, and experiences to old or previously learned materials. ----

(Contextualization of new to given or known whether to help orient learners to the new experience, or to help them put them figure out what is going on is the concern in this item.)

- 10 Teacher makes frequent use of various forms of exemplification in her/his presentations. Examples can be instances, functions, or variants even. ----
- 11 Teacher makes use of explicit discourse markers such as "first", "then", "before", "for example", "Let me explain", "I have three things to tell you about", "Let me say that to you in a different way", etc. to help the students follow what is being presented. These comprehension aids are meant both as structural devices that help the listener to sense the organization of the lesson, and as traffic signals that allow them to sense what direction the discourse is taking. ----
- 12 The English used by the teacher during formal lessons and in other instructional activities is native-like in grammaticality and pronunciation. It provides the LEP students with a clear and adequate model of standard English. ----
- 13 Teacher frequently calls attention to language in the course of using it for instructional purposes. (That is, the teacher comments on meanings, usages, or the functions of language whether or not lesson deals specifically with language.) ----
- 14 Teacher tends to present information in paradigm-like sets. (That is, the teacher often uses the same syntactic structures repeatedly in a given exchange. Each sentence differs from the others in particulars, but they are structurally similar. The result should be "structural transparency" rather than repetitiveness.) ----
- 15 The teacher often discusses vocabulary items explicitly (not just during language arts or reading instruction). ----
- 16 The teacher often discusses grammatical ----

structure explicitly (not just during language arts or reading instruction).

- 17 The teacher emphasizes communication and comprehension in her/his lessons. (That is, the teacher often indicates that she/he is more concerned about effective communication and understanding in presentation of subject matter than she/he is about control or efficiency in covering all of the materials at hand.) -----

Instructional Language Features Related to Content:

- 18 It is usually clear what the teacher's instructional goals are for a given lesson. (That is, it becomes obvious to the students what the teacher is trying to teach them during the course of an instructional activity.) -----
- 19 The content being covered during formal lessons appears to appropriate for the grade level. (While the curriculum may have to be adjusted because the children are limited in their English proficiency, it should not be reduced to curricular pablum--a relative judgment is called for here.) -----
- 20 The teacher often tries to inject some richness into the materials that are covered in the curriculum. (The teacher does not provide the students with a bare minimal coverage of the curriculum just because they happen to be LEP, but tries to go beyond that by giving them experiences and teaching them things that add some enrichment to their education.) -----

Structure of Lessons:

- 21 It is usually clear what the teacher expects the students to be doing or getting out of a given lesson. (That is, it should be obvious to the students what the teacher expects them to be doing, or what she expects them to getting out of what she is teaching them.) -----



- 22 The structure and conduct of lessons in this classroom are well-enough established so it can predicted by time and place what the students should be doing (and learning) throughout the school day. ----
- 23 The teacher has established consistent lesson formats (or scripts) for lessons in each subject area (e.g., reading, math, science, etc.) ----
- 24 There are clear and well established phases in each lesson. The students appear to know what is going to be happening in each phase, and they seem to know what is expected of them throughout the lesson. ----
- 25 There are clear lesson boundaries. It is clear when lessons taught by this teacher have begun, and when they have ended. Teacher signals the beginnings and endings by well established verbal or non-verbal cues. ----
- 26 The lessons in this class follow a daily schedule, and this schedule is generally adhered to. ----
- 27 This teacher's lessons tend to be consistent across days for a given group, and across groups for a given day. Each group gets a more or less equivalent experience, both in time, and in the quality of the experience. ----

Opportunities for Students to Practice English in Class:

- 28 Everyone (particularly the LEP students in the class) gets turns for verbal participation in teacher directed instructional activities. ----
- 29 Students are called on to give extended responses during teacher directed instructional activities. ----
- 30 Students in this class have many and varied opportunities to engage in verbal practice and recitation ----



using English each day.

- 31 Students in this class are free to talk with one another during class. They are not discouraged from working together, or from talking with classmates while working. ----
- 32 There are many students in the class who know English well enough to provide input for the LEP students (English monolinguals and bilingual students who are fully proficient in English). ----
- 33 The LEP and FEP students (bilingual or monolingual) take advantage of opportunities to interact with one another during classtime, and they make use of English during these interactions. ----
- 34 LEP students in this class have many opportunities to interact with English speaking classmates because they are grouped together for instruction during the day, or because of seating arrangements. The social dynamics of the class favor interaction between the two groups. ----
- 35 There are built-in opportunities for students to interact with one another in English during class (e.g., formal or informal peer teaching, groupwork). ----
- 36 The teacher provides ample feedback in English to students on their verbal participation. ----
- 37 The feedback which teachers provide for the students is useful--e.g., they consist of expansions, subtle correction through rephrasings, etc. ----

Language Separation:

- 38 The teacher keeps the two languages of instruction completely separate, and neither engages in language switching nor in translation. (The separation might be by person, subject or by session.) ----

Note that the specific focus in this set of ratings is the use of English in instructional activities, not the use of the students' L1. Instructional language use in general (whether the L1 or L2) is rated on the "Classroom Features Relevant to Language Learning" form. There means a certain amount of duplication of effort in the case of the English-only classrooms, since the ratings that were done there was on English too; many of the items on this list were not on the other, so it has to be done for every teacher.

Four major aspects of instructional language usage were assessed by the use of this rating form. The first related to characteristics of language as "linguistic input", the second to the communicative content of the language that is produced in instructional activities, the third to structural characteristics of instructional activities that appear to affect the utility of the language as input, and the fourth to aspects of instructional organization that affect the extent to which LEP students find opportunities to practice using English in instructional activities.

Ratings were done in the following way. The same audio and video recorded materials that were used for the ratings that yielded the previously discussed set of instructional variables served as the basis for this set. Ratings were made on each of the 38 descriptors of language usage after viewing or listening to the recorded materials that were available for a given class. Separate ratings for each class were done on the recorded materials for a particular day of observations and were averaged for each feature over however many days of recorded materials that we had.

Ratings on these language use descriptors were grouped for analysis in several ways. These 38 features fed into 11 combined variables related to language use in the classroom. The 11 combined variables were these:

1. Good input (items 1-17)
2. Appropriately adjusted content (items 18-20)
3. Structural support for input (items 21-27)
4. Opportunity to practice English in teacher directed instructional activities (items 28-29)
5. Opportunities to practice English with peers (items 31-33)
6. Built-in opportunities to interact with classmates who speak English through peer teaching, grouping, or seating arrangements (items 34-35)
7. Total practice in English
8. Teacher provides useful feedback (items 36-37)
9. Language separation
10. Percent time in teacher directed instructional activities
11. Percent time in individual seatwork

The students' progress in language learning over the course of the study year was examined against this set of variables as well as the set of instructional practices variables described earlier in this Chapter. These variables were later combined into larger summary variables by statistical means that are discussed in Chapter 4. The features of instructional language usage covered in this set of ratings found their way into two main summary variables, namely one that is described as the "Instructional Language as Input" variable, and

the other that we can describe as the "Opportunities to practice using English with peers and teachers" variable. The first incorporates the input, content and structural descriptors listed on the rating form (i.e., variables 1 to 3 above) while the second consists largely of the interactional opportunity items (variables 4, 5, and 6 above). Both will be discussed in some detail in Chapter 4 since they, along with a number of the instructional practices variables that have been described previously were found to influence language learning in our seventeen classroom in crucial ways.

## CHAPTER 4

### ORAL LANGUAGE VARIABLES

In general, our language assessment was aimed at the kinds of English language proficiencies that are important for school learning. It seems obvious that speaking listening, reading, and writing are all important language activities in school, but language assessments in the past generally have not done justice to the full range of school-related language skills. Some assessments, for example, focus entirely on the child's knowledge of syntax. Others test the learner's knowledge of English vocabulary exclusively, or at particular abilities such as those involved in sentence repetition, or auditory discrimination of minimal phonetic contrasts. Few of the instruments currently used for assessing language proficiency are based on performance in tasks that bear any relationship to actual uses of the target language in the real world. The usual approach is to elicit a sample of the child's speech, or a measure of the child's performance in a task based on knowing some aspect of the language, and to conclude that that constitutes a reasonable representation of what he knows and can do with the language in other situations. Implicit in such an approach are the assumptions that 1) all uses of a given language draw upon a common core of linguistic knowledge, and 2) that core constitutes the essence of language proficiency. What this view overlooks is the likelihood that each mode of language use makes unique demands on the language user.

There has been considerable interest in recent years in establishing the differences that exist between the linguistic abilities and skills involved in using written language and those involved in oral language, and in determining what implications such differences may have for education. We have argued that even within these two domains, further distinctions need to be made with regard to the demands of one task or another (McLaughlin, 1985; Wong Fillmore, 1982). There appear to be important differences between the talk that is used for teaching and learning and that which is used for other purposes (Edwards and Furlong, 1978). Moreover, it seems likely that each mode of language use entails a number of dimensions or facets that should be distinguished. Consequently, we have tried to assess each mode of English proficiency in as much depth as possible, by having our subjects perform a variety of speaking, listening, reading, and writing tasks that are as nearly like those they have to perform each day in school as feasible, and by looking at their performances in a number of different ways.

In some respects, we have attempted to simulate in our language assessment procedures, the kinds of communicative demands that are placed on children when they are taught in English. The language skills and knowledge they have to apply in dealing with our tasks are all those that they have to use in dealing with instructional activities that are conducted entirely in English. In other respects, we tried to probe beneath the surface of children's response to such demands. Our aims have been to establish how far our subjects have progressed in their learning of English based on their performance in

our tasks, and to determine how adequately they can handle English instruction based on what they have learned. In addition, we have collected parallel data on our subjects' performances in their first languages, whenever that was feasible. Our goal in this regard was not to measure language dominance per se, but to assess the impact of first-language proficiencies on second-language learning.

#### 4.1. Oral Language Assessment Instruments

In this section we discuss the rationale underlying the development of a procedure for assessing oral English language proficiency in LES students, and discuss what it can reveal about the development of English language skills in second-language learners.

The first problem we faced in developing this procedure had to do with deciding the kind of language skills to be assessed. This was not a small problem. The tests of language proficiency which are widely used for the classification and placement of NES/LES students into special programs assess various aspects of linguistic skills, although few of them focus on more than one or two specific aspects linguistic ability. A given test, for example, might assess vocabulary comprehension or production exclusively, or it might narrowly focus on assessing the extent to which a small set of grammatical morphemes or particular sentence patterns appear in the speech of learners. Others focus on assessing the ability to answer questions or to imitate test sentences. The best of these assess a range of such skills.

Nearly all such tests assume that when one learns a language, the levels of development throughout the system being acquired are more or less equivalent. Hence a sampling of any part of the system will reveal the state of the whole. They also assume that the linguistic skills being measured are general rather than functionally specialized; hence the demonstration of language skills in a test performance will predict how well the student will be able to function in any other activity carried out in the language, independently of whether it is an academic activity or one that is strictly social. The idea behind this view of language proficiency is that language knowledge is unitary and homogeneous. To test language proficiency, one simply needs a small sample--no matter what its source--and that suffices. The tiny sample would reveal the state of the whole, and whatever purpose the whole can serve can be discerned from an examination of the bit.

The approach we took in deciding what language skills to assess was to conduct a functional analysis of the language students actually have to handle if they are to participate effectively in classroom learning activities. We went into classrooms to study the language used by teachers in their teaching of lessons. We assumed that if students are to learn what they are supposed to get out of those lessons, they must be able to understand the language being used in them. Further, if they are to get full benefit out of these activities, the students have to be able to produce the language required for participation in such lessons. All-day observations were conducted in 12 third and fifth grade classrooms over a four month period; some of



these classes were designated as bilingual ones by school officials, and some of them, all-English. Some were like the classes we eventually selected as research sites for this study, but some were not. We wanted for our investigation of classroom language requirements "a representation of the full range of demands that LEP students might encounter in the kind of schools they were likely to attend. Recordings were made of full range of instructional activities conducted in the twelve classrooms on audio-tapes, and observational notes were made during these on-site visits which enabled the later descriptions of the instructional events that had taken place during the day. Representative activities were later transcribed, and the form and function of the language used by teachers and students was analyzed and described (Wong Fillmore, 1982).

What resulted from these efforts was a characterization of the language functions children are expected to handle in instructional activities, and a description of the skills they must have in order to participate in these activities (many of these being linguistic skills that teachers expect students to have). The approach we took to assessing the development of oral English language skills in our subjects has been to look at the degree to which they had acquired, and were able to handle, the kind of language teachers assume children have when they instruct them in English. Our aim was to develop a test that had ecological validity: one that assessed the ability to handle the various functions of academic English that students encounter in instructional activities. These functions included:

- (1) Instructional language functions:

Procedural language

- Turn allocation statements
- Formatting and instructional statements
- Contextualizing statements
- Directives concerning behavior, participation

Language used in exchanges of information

- Explanations
- Descriptions
- Relational statements (new to old information)
- Definitions and exemplifications
- Summaries and recapitulations
- Requests for information, explanations, summaries
- Requests for feedback and confirmation
- Evaluative statements

(2) Productive language functions:

Self-initiated speech

- Explanations
- Descriptions
- Informational statements
- Requests for help, clarifications
- Requests for information
- Requests for attention, turns

Responses to teacher elicitation sequences

- Opinions solicited by teacher
- Information as requested by teacher
- Illustration of points as requested
- Instances of classes, categories as requested
- Summaries or restatements as requested
- Restatements of information provided in the lesson

Further, our goal was to assess the language skills required for handling such functions pretty much in the way children were called on to demonstrate them in school; hence we designed an assessment procedure that resembled an actual classroom lesson, thus insuring that the procedure had a certain degree of face validity.

#### 4.1.1. The Shell and Rock Games

The procedure we devised took the form of a science lesson in which our subjects are taught some information in a format that is similar to a real classroom lesson. The language used in it can be characterized as formal "teacher talk", the kind of language English speaking teachers use in formal lessons in to convey information to students, to explicate them, to instruct students in what they are to do, and in eliciting verbal responses from them. It is language which can be characterized as highly decontextualized. While some of the expressions that are used have quite well-established conventional uses in lessons and thus the speaker's communicative intentions can be understood without reference to the language that was actually spoken, much of what is being communicated in this simulated lesson can be understood only to the extent that the learner actually understands the language that is used. There are two versions of the instrument: one is a lesson on shells, which we call "The Shell Game," and the other is a lesson on rocks, which (for symmetry) we call "The Rock Game." The Shell Game is the instrument used to establish the level of oral language proficiency the subjects in our study had at the beginning of the study year and the Rock Game was used to assess their oral language proficiency at the end of the year. The two are identical in format, but as it turned out the Rock Game was somewhat more difficult (a problem we will discuss later).

Each involves an audio-recorded lesson which is set up in a way that has the subjects actually interacting with and responding to a canned teacher, verbally and nonverbally. There is a collection of

actual materials to look at, handle, and talk about-- shells in one, rocks in the other. The purpose of the procedure was to "teach" the students some information they could put to use in carrying out some simple tasks as directed, and about which they could talk, in response to elicitation questions put to them by the taperecorded teacher. In fact, however, it did not matter so much whether they were actually "learned" what was being taught as it was for them to be able to get the gist of it what had been said, and to be able to give it back, or to make use of it in responding to questions about the content. One of the problems we faced in putting together the instrument was in getting children to respond to a taperecorded voice. Because of the unnaturalness of talking to an inanimate object such recording machine, many children simply do not respond to it. It is hard enough at times to get them to respond to flesh-and-blood interviewers. To make the interaction as realistic as possible, we arranged things so the subject heard both the stimulus tape and their own voices through the same channel via a pair of Sony walkman-like headsets. The resulting auditory feedback of their own voices heard in juxtaposition to the recorded teacher's voice was strangely intriguing; it had the effect of giving them the impression of speaking with the teacher over the telephone, or perhaps on the radio. In any event, this auditory gimmick was just strange enough to trick just about everyone into thinking that they were actually dealing with a real teacher. With few exceptions we were able to get a more than adequate measure of their performance through this procedure. The language used in the lesson was designed so that no matter what or how the children responded, they would receive some appropriate feedback. This had the

effect of involving them totally in the task.

The lessons were constructed in ways that made them suitable for children from first through the end of fifth grade. We used the tests only with 3rd and 5th graders, but we piloted them on children as young as first graders. This was necessary since we wanted the same instrument

to be usable with both of the grades that our subjects would be drawn from, and no matter what their level of language proficiency. We hoped that by providing all of the information needed to answer the questions and to complete the tasks that we would be asking of our subjects, and by having the lessons deal with topics and subject matter of equal interest to children in the first 5 grades, we would be able to handle the entire age range we were dealing with. What we aimed for was a procedure that would get at the language level of the children, and not the educational level nor the academic aptitude of these children.

The Shell and Rock Games were thus designed to teach children about some things they could talk about and do during the test. The procedures gave them information about shells and rocks, and it then had them talking about certain of them and arranging them as requested by the taperecorder teacher. The language used is like that used in classroom lessons. The teacher told about the shells or rocks that the subjects had before them. The children could thus examine the materials that were being discussed or described, and they see what the teacher meant, provided they understood what she was saying.

Although the children had the materials that comprised the topic of the lesson before them, they would have been able to get the gist of the teacher's utterances only if they knew the language. As mentioned earlier, much of the language used in the lesson was decontextualized and required that the children understand the language, in order to interpret what was being said or what they were being asked to do. The items were generally arranged from easy to difficult ones, and the information that was given in the lesson built up gradually so that the ability to comprehend and handle each subsequent item depended on information and experiences that had been provided previously. Transcripts of the Shell Game and the Rock Game are found in Appendix B.

The tests were administered individually and the test administrator kept a record of the nonverbal responses made by the children as they progressed through the lesson. The verbal responses were audio-recorded, and later transcribed. There was also a list of additional specified prompts that the researcher supplied if the children did not respond immediately. The idea behind these is that these prompts help to move the task along and make it possible for us to get through the task.

To convey something of the flavor of the children's responses, some sample responses from children at various levels of proficiency follow. The first sample is from a third grader at a quite low level of English proficiency after three years in school:

(Q: Where do marine animals live?)

A: "In she house."  
 (Q: What is a mollusk?)  
 A: (Pointing at one of the shells) "This one?"  
 (Q: "Why do mollusks need shells?")  
 A: "Because he don't got some bone."  
 (Q: "Describe the starfish.")  
 A: "It um like some little little tiny rock."  
 (Q: "Why isn't the starfish a mollusk?")  
 A: "Because it not a star.")

The following are some sample responses from two somewhat more proficient, but as yet obviously imperfect speakers of English, also third graders:

(Q: "Can you tell me why it's called a starfish?")  
 A: "Because it, because it looks like a star."  
 (Q: "Can you describe the starfish?")  
 A: "It looks like a ti--a tiny rock and like sands too."  
 (Q: "Describe the other side of the starfish.")  
 A: "The other side looks like a, some tiny nails in it. Like that and threads, like threads too."  
 (Q: "Can you tell me why it isn't a mollusk.")  
 A: "Because it doesn't have shell. It only can swim but it isn't mol. It is a marine."

(Q: "Why is it called a starfish?")  
 A: "Because it look like a star."  
 (Q: "Describe the starfish.")  
 A: "It touch--ah--sometime it touches, a like a wall."  
 (RA: "A wall?")  
 A: "Yeah, a house a you could ah, ah, if you touch ah, somebody house you ah, you feel like that."  
 (RA: Ah, ah, how?)  
 A: "Like, like, a little rockses."  
 (Q: "Describe the other side.")  
 A: "Ah, the ah, the side of starfish has look like a corn."  
 (RA: "Like a cone?")  
 A: "Corn! Yeah, c-o-r-n."  
 (RA: "Oh, like a corn. Why do you say that?")  
 A: "Ah, the outside of the side, the shape of corn, five corns--N, ah, five little, ah, five ah, five corn over here, one is chopped off though. Look like ah, look, ah, banana inside. Like a banana. If you chew it, it will, it look like this."

Finally, some sample responses from another third grade student, this one who is almost fully proficient in English:

(Q: "Do you remember what a marine animal is?")

A: "Uh something that lives under the sea, and used to have animals in them, but not no more".

(Q: "What is the shell for?")

A: "For protecting the animal-- that live in 'em."

(Q: "What is a mollusk?")

A: "A mollusk is a --a marine animal --a marine animal that--that lives in a shell."

(Q: "Tell me why they need shells?")

A: "They need the shells to protect them from other animals-- that could eat them."

(Q: "What would happen to these little animals if they had no shell?")

A: "The other animals of the sea would eat 'em."

#### 4.1.2. Scoring Procedures

In devising a set of procedures for analyzing and scoring the Shell Game (and Rock Game) test data, we decided to adopt a multiple analysis schema which would give us separate scores for different aspects of language proficiency. It was our belief that a single global score of the child's oral proficiency on the Shell Game would be misleading. For one thing, there is research evidence showing that comprehension and production may develop at somewhat different rates, and that in general, language learners may understand new forms and structures well before they can produce them. This suggested that we needed to examine these two aspects of language performance separately. Further, it seemed that there were a variety of ways to assess productive capability of learners based on samples of their speech. Our aim was to obtain as complete an assessment of our



subjects' language capabilities as we could derive from a multifaceted examination of their performance in the test. We closely examined every aspect of their responses to instructions and questions (the language they produced in their verbal responses and the actions they performed in their non-verbal ones) to determine how well our subjects understood and could speak English.

#### 4.1.2.1. Production

We eventually decided on production measures that took into account a number of dimensions: how grammatically well-formed (i.e., "correct") an individual's utterances were, how grammatically complex they were, and how informative an individual's responses were to the questions that were asked in the test (i.e., how much of the information requested in each question was actually provided in the response). Thus our scoring procedure consisted of three components: (1) Well-Formedness, (2) Grammatical Complexity, and (3) Informativeness. Scoring was done at the item level in each category. That is, the response to each of the items in the test that were included in our analyses were coded separately in each of the three categories according to the criteria listed below. Responses sometimes consisted of short phrases and sometimes of multiple structures; ratings were on the entire response, with the volubility of the response generally reflected in ratings of informativeness.

Well-Formedness. This category referred to the grammatical correctness of the structures used by the subject in producing responses to the test item. We were concerned here with

appropriateness of lexical choices and idiomaticity of expression as well as with the well-formedness of the grammatical constructions used. Two advanced graduate students in linguistics (both of them specialists in syntax and linguistic pragmatics) coded transcriptions of the children's responses (with each item judged separately) according to the following criteria:

- 0= No response, no attempt to answer the question.
- 1= Restricted or inappropriate use of words; serious grammatical errors resulting from omissions of forms or word order problems: e.g.,
  - Q: What is a mollusk?
  - A: What--dis what? Dis for? Dis what?or,
  - Q: Why do mollusks need shells?
  - A: For dey b'oke it...for dey cou' touch it, and lookit. (=For they broke it...they could touch it, and look at it.)
- 2= Some grammatical errors, but less serious ones, involving circumlocutions and simplifications; disjointed and non-idiomatic responses: e.g.,
  - Q: Can you describe the starfish?
  - A: It touch, ah, sometime it touch like a wall...like a house ah, if you touch ah, somebody house you, ah, you feel like that. (= "It feels like a (stucco) wall; if you touched (the stucco wall on) somebody's house, you (would) feel like that".
- 3= Nearly free of grammatical errors; minor flaws in expression, perhaps, resulting in somewhat disjointed and slightly non-idiomatic responses: e.g.,
  - Q: What do you think would happen to these little animals if they had no shells?
  - A: They--they will die, if they don't have bones. (= "They would die, if they had no shells [because they have no bones"].)
- 4= Responses are nearly perfect in form and expression, although they might include restarts, etc.
  - Q: Do you remember what a marine animal is?
  - A: Uh something that lives under the sea, and used to have animals in them, but not no more. (= "...and [the shells] used to have animals in them...")

To insure that the coders understood and were in agreement on the cri-

teria being used, we had each of them rating the tests of all of the subjects from several different classes. After discussing the responses on a few of the protocols together, the coders worked separately on the tests done of the subjects from three of the 17 classes in our study. Because no verbal responses were required for some of the test items only certain ones had to be coded. There were 24 such items in the Shell Game (and an equivalent number in the Rock): #s 9, 10, 15, 24, 28-34, 38, 39, 41-43, 46, 52, 54, 61-65. The degree of agreement on "well-formedness" for the three classes (31 cases) that were coded by each linguist was .88. This degree of agreement was found on total Shell Game well-formedness scores for individual students in three classes coded at the beginning, middle, and end of the coding period for the Shell Game. The later checks on interrater reliability were done on a few individuals drawn from three classes rather than on all of the students in those classes. The same procedure was followed in determining the reliability for the following two categories.

Grammatical Complexity. This relates to the structural complexity and variety of the structures produced in response to the elicitation items on the Shell Game. The concern here is both with the complexity of separate utterances, and with the the relational coherence of multiple structure responses. The coding scheme was as follows:

- 0= No response
- 1= Fragmentary responses--one or two word responses or phrasal responses where, given the way the question was framed, a more complex response was called for (e.g., Question: "Where are you going?"  
Answer: "Store"  
rather than "To the store")

- 2= Single, simple sentences.
- 3= Simple sentences conjoined by "and", or a series of simple sentences. Sentences containing complex verbal complements and those introduced by "because".
- 4= Responses involving a series of propositions with at least one subordinated logical relationship between them; relativized constructions.
- 5= More than one subordinated clause; cohesive ties between propositions marked explicitly; embedded constructions.

In the case of Grammatical Complexity, the reliability between the two coders on the Shell Game was .96.

Informativeness. This is an assessment of the amount of information actually provided by the student in responding to the question. The coding scheme was:

- 0= No response, or "I don't know"
- 1= Minimal response or not a full response to the question (This does not mean a full sentence is required, but it's less than one should be able to get away with, given the way the question was framed).
- 2= An adequate response given the way the question was framed-- but no more than what is called for.
- 3= More than called for by the question as an adequate response; it meets the demands of the question, and adds perhaps a contrast, or offers another dimension.
- 4= An expanded response that goes well beyond the simple demands of the question; a multiple dimensional response with many details, or specific information.

In this case the reliability between the coders was .90.

How do these measures relate to each other and to other measures of oral language proficiency? We correlated each of these measures with each other and found a correlation for the Shell Game of .61 between Well-Formedness and Grammatical Complexity, .65 between Well-Formedness and Informativeness, and .81 between Grammatical Complexity and Informativeness. For the Rock Game the correlations were

Grammatical Complexity, .81 between Well-Formedness and Informativeness, and .96 between Grammatical Complexity and Informativeness.

We also correlated Shell Game measures with raters' judgments of oral language proficiency based on segments of a taped child interview in which the children described everyday events in their lives (how they had spent the previous day). In this case, we used an adaptation of the Foreign Service Institute proficiency scale for judging the proficiency of our subjects. These ratings were done by the same two linguists that did the coding of the Shell and Rock Game protocols. After listening to each speech sample, the two raters scored the speaker along a 5-point scale for fluency and pronunciation. Interrater agreement over all children was in the .90s for both measures.

The correlations between the measures of oral language proficiency derived from the Shell Game and the assessments of pronunciation and fluency based on the speech sample from the child interviews were very low (from  $-.11$  to  $+.11$ ). One possibility we faced was that one or both of the procedures was not giving us a good assessment of how proficient the children really were. A comparison of the two types of raw data we were using (that is, Shell and Rock tapes with the interview tapes) showed that the pictures we had gotten from the two procedures were reasonably accurate. The problem was that proficiency is not always reflected in fluency and pronunciation. Some language learners can produce speech that is very well-formed and quite complex, and yet not be particularly fluent nor good at English pronunciation. Others can say a lot and with great confidence or sound quite native-like, but make a lot of grammatical errors in their

speech. This would suggest that pronunciation and fluency are not at all good yardsticks for measuring language proficiency. And yet, it is obvious that quite frequently, teachers do form judgments about the linguistic proficiency of children based on how freely they speak, and on their pronunciation. These data data support the possibility of what Skuttnabb-Kangas called a whereby a child may be judged to be quite proficient in a language on the basis of oral fluency, but may not be very proficient at all on the aspects of oral language proficiency that are important for successful classroom functioning. What these data say is that language proficiency is not a global concept, that there are different kinds of language skills required in different situations and that even within a single situation, such as the classroom, oral language has to be examined in a number of different ways.

A final of set of correlations was run between the Shell and Rock game measures and CTBS scores taken in the Spring of 1981 (our study began in the fall of 1981) and in the Spring of 1982 (when our study concluded). The CTBS scores were based on three language subscales--spelling, mechanics, expression--and total score. Correlations between the initial CTBS scores and a combined score on the Shell game (the total z-score obtained by adding z-scores for Well-Formedness, Grammatical Complexity, and Informativeness) ranged from .26 to .41. The correlations for comprehension scores on the Shell game (as measured by the Weighted Comprehension score--see below) and CTBS measures ranged from .40 to .60. Correlations between the scores on the Spring 1982 CTBS test and a combined z-score on the Rock game (obtained in

the same manner) ranged from .12 to .40. Comprehension scores on the Rock game (again measured by the Weighted Comprehension score) and CTBS measures ranged from These correlations suggest that there is some overlap between our measures (especially comprehension measures) and what is measured by the CTBS, but that the overlap accounts for less than half of the variance, even on comprehension ratings. This can be explained by the fact that the CTBS requires reading skills, but our measures were essentially oral language measures (but not measures of fluency and pronunciation). Essentially, then, the Shell and Rock games measure something different from what tests of surface fluency measure and from what the CTBS measures.

#### 4.1.2.2. Comprehension

We determined how well the children understood what was being said to them on the basis of how they responded, both verbally and nonverbally to the test items. This judgment was made by the interviewer; points were assigned to the child according to whether prompts were needed and according to whether the response showed full, partial, or no understanding. What were after were appropriate responses rather than correct ones necessarily. For example, when asked how many sheets of papers were in the box of materials used in the test, a child, miscounting the papers, might have given "3" as the answer rather than the correct one which would have been "4". In our coding procedure, the child would have been given full credit for the answer since it indicates that he understood the question. The child need not have made a "correct"



response to have shown understanding of the question.

Initially, we had hoped to determine in an apriori manner what items would be more difficult for the children because of their structural and pragmatic properties. We developed an elaborate coding scheme for rating items in terms of these features. But the children did not reward these efforts by confirming our judgments of difficulty. At times, they had all kinds of problems with items we thought were easy. Even more exasperatingly, they frequently had no problems understanding the items we thought were very difficult. Consequently, our final analysis of comprehension ability was based on how difficult the items were empirically for the children:

Specifically, we determined, for our Chinese and Spanish samples, which items fell into five different levels of difficulty, beginning with the most difficult in Category 5 and ranging to the least difficult in Category 1. We then computed the percent of the items in each of the five categories that each child understood correctly. To have understood the item correctly, the child had to show full understanding in responding, without any prompts being supplied.



## CHAPTER 5

### MAJOR FINDINGS

In this chapter we discuss the principal findings of our analyses relating our independent variables to the development of oral language proficiency. First, we present pre- and posttest data from the Shell and the Rock games. Then, we look at the gain from pre- to posttest scores for the children in our sample. We then looked at patterns of change across our classes and attempt to relate these patterns of achievement to classroom characteristics. The principal analyses are discussed next, in which we relate the development of oral language comprehension and production skills to instructional practices and language use variables in the classroom. The chapter concludes with a discussion of the patterns of instructional language use which influenced language learning.

#### 5.1. Oral Language Data

##### 5.1.1. Pretest Data: Shell Game

Data from a small number of subjects on the Shell Game had to be disregarded because they failed to respond to any of the items or because of irregularities in testing. The eventual number of cases where the data for both the Shell Game and the Rock Game were appropriate for statistical analysis was 151. Table 5.1 lists the

Table 5.1

Production Scores by Class  
and Language Group  
on Pretest (Shell Game)

Mean and Standard Deviation

|                  |        | Well-Formedness |      | Grammatical Complexity |      | Informativeness |      |
|------------------|--------|-----------------|------|------------------------|------|-----------------|------|
|                  |        | Mean            | S.D. | Mean                   | S.D. | Mean            | S.D. |
| Grade 3: Chinese |        |                 |      |                        |      |                 |      |
| 3C1              | (n=10) | 3.13            | .24  | 2.35                   | .53  | 1.73            | .43  |
| 3C2              | (9)    | 3.14            | .32  | 2.18                   | .40  | 1.72            | .19  |
| 3C3              | (8)    | 2.38            | .58  | 1.36                   | .79  | 1.37            | .55  |
| 3C4              | (6)    | 3.14            | .20  | 2.28                   | .54  | 1.92            | .43  |
| 3C5              | (11)   | 3.20            | .31  | 2.49                   | .48  | 2.06            | .35  |
| 3C6              | (10)   | 3.33            | .26  | 2.61                   | .50  | 2.05            | .31  |
| Grade 3 Hispanic |        |                 |      |                        |      |                 |      |
| 3S1              | (10)   | 2.99            | .22  | 2.37                   | .41  | 1.72            | .30  |
| 3S2              | (11)   | 3.02            | .69  | 1.92                   | .81  | 1.59            | .54  |
| 3S3              | (5)    | 2.91            | .56  | 1.47                   | .52  | 1.18            | .40  |
| 3S4              | (12)   | 3.12            | .43  | 2.11                   | .62  | 1.73            | .42  |
| 3S5              | (8)    | 3.08            | .46  | 2.41                   | .50  | 1.86            | .39  |
| 3S6              | (3)    | 3.40            | .35  | 2.00                   | .38  | 1.64            | .23  |
| 3S7              | (7)    | 3.31            | .35  | 2.18                   | .52  | 1.69            | .29  |
| Grade 5 Chinese  |        |                 |      |                        |      |                 |      |
| 5C1              | (11)   | 3.14            | .42  | 2.31                   | .26  | 1.94            | .25  |
| 5C2              | (8)    | 3.25            | .51  | 2.34                   | .64  | 2.14            | .59  |
| Grade 5 Hispanic |        |                 |      |                        |      |                 |      |
| 5S1              | (9)    | 3.28            | .50  | 2.01                   | .54  | 1.76            | .37  |
| 5S2              | (11)   | 3.25            | .20  | 2.73                   | .53  | 2.08            | .36  |

mean and standard deviation by class and language group for scores for Well-Formedness, Grammatical Complexity, and Informativeness on the Shell Game. Recall that Well-Formedness is scored on a scale of 0 to 4, as in Informativeness, but that Grammatical Complexity is scored on a scale of 0 to 5. Because of these differences in scoring, we converted all scores to z scores, calculated separately for 3rd and 5th grade data. These z scores for the pretest (the Shell Game) are given in Table 5.2. The table also lists the total z score, obtained by summing the z scores for all three scoring categories.

It can be seen from the table that the classes that did best on the Shell Game were 3C6, 3C5 and 3S5 (based on Total score). The poorest classes were 3C3, 3S3 and 5S1.

Table 5.3 shows the comprehension data for our subjects by class and language group. These data are in the form of percentages of correct responses to items of varying degrees of difficulty (Category V is the most difficult and Category I is the least). The table also shows a Weighted Comprehension Score obtained by the formula:

$$5 (\% V) + 4 (\% IV) + 3 (\% III) + 2 (\% II) + (\% I)$$

On the basis of the Weighted Comprehension Score, the highest classes at the beginning of the year were 3C6, 3C4, and all 5th grade classes (although 5C1 was somewhat lower than the others). The lowest classes were 3S3, 3C2 and 3C3.

Table 5.2

Z-Scores for Production Items  
by Class and Language Group  
on Pretest (Shell Game)

Mean and Standard Deviation

|                   | Well-Formedness |      | Grammatical Complexity |      | Informativeness |      | Total |
|-------------------|-----------------|------|------------------------|------|-----------------|------|-------|
|                   | Mean            | S.D. | Mean                   | S.D. | Mean            | S.D. | Mean  |
| Grade 3: Chinese  |                 |      |                        |      |                 |      |       |
| 3C1               | .13             | .56  | .17                    | .82  | -.20            | .93  | .10   |
| 3C2               | .15             | .74  | -.08                   | .62  | -.21            | .44  | -.14  |
| 3C3               | -1.61           | 1.34 | -1.26                  | 1.22 | -1.04           | 1.28 | -4.01 |
| 3C4               | .15             | .46  | .07                    | .84  | .26             | .99  | .48   |
| 3C5               | .29             | .72  | .39                    | .75  | .57             | .81  | 1.25  |
| 3C6               | .58             | .59  | .59                    | .78  | .55             | .72  | 1.72  |
| Grade 3: Hispanic |                 |      |                        |      |                 |      |       |
| 3S1               | -.22            | .48  | .41                    | .66  | .09             | .72  | .28   |
| 3S2               | -.15            | 1.51 | -.31                   | 1.32 | .03             | 1.31 | -.43  |
| 3S3               | -.40            | 1.19 | -1.05                  | .85  | -1.21           | .97  | -2.67 |
| 3S4               | .05             | .93  | .00                    | 1.22 | .11             | 1.01 | .16   |
| 3S5               | -.03            | .99  | .48                    | .81  | .45             | .96  | .90   |
| 3S6               | .67             | .76  | -.18                   | .63  | -.10            | .56  | .39   |
| 3S7               | .46             | .77  | .11                    | .85  | .02             | .70  | .59   |
| Grade 5: Chinese  |                 |      |                        |      |                 |      |       |
| 5C1               | -.09            | .84  | -.03                   | .57  | -.20            | .59  | -.32  |
| 5C2               | .13             | 1.02 | .04                    | 1.45 | .27             | 1.39 | .44   |
| Grade 5: Hispanic |                 |      |                        |      |                 |      |       |
| 5S1               | .05             | 1.41 | -.62                   | .85  | -.45            | .95  | -1.02 |
| 5S2               | -.04            | .56  | .51                    | .83  | .37             | .93  | .84   |

Table 5.3

Comprehension Data:  
Percent Correct Responses  
to Items of Varying Degrees of Difficulty  
by Class and Language Group  
on Pretest (Shell Game)

Mean and Standard Deviation

| Category:        | V    |      | VI   |      | III  |      | II   |      | I    |      | Weighted<br>Comprehension<br>Score |      |
|------------------|------|------|------|------|------|------|------|------|------|------|------------------------------------|------|
|                  | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean                               | S.D. |
| Grade 3 Chinese  |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 3C1              | .36  | .22  | .61  | .23  | .71  | .17  | .79  | .16  | .90  | .13  | 8.85                               | 2.50 |
| 3C2              | .21  | .18  | .28  | .14  | .56  | .22  | .63  | .23  | .81  | .18  | 5.91                               | 2.47 |
| 3C3              | .25  | .17  | .26  | .27  | .52  | .29  | .65  | .28  | .88  | .12  | 6.02                               | 3.16 |
| 3C4              | .43  | .21  | .52  | .14  | .74  | .18  | .91  | .08  | .91  | .11  | 9.23                               | 2.24 |
| 3C5              | .27  | .21  | .33  | .18  | .66  | .20  | .76  | .14  | .90  | .09  | 7.10                               | 2.32 |
| 3C6              | .45  | .18  | .75  | .15  | .75  | .16  | .85  | .10  | .95  | .07  | 10.16                              | 1.66 |
| Grade 3 Hispanic |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 3S1              | .35  | .20  | .49  | .24  | .71  | .17  | .84  | .10  | .92  | .11  | 8.42                               | 2.40 |
| 3S2              | .36  | .31  | .48  | .25  | .61  | .28  | .81  | .18  | .93  | .07  | 8.12                               | 3.41 |
| 3S3              | .12  | .11  | .19  | .15  | .43  | .18  | .53  | .25  | .78  | .17  | 4.47                               | 1.86 |
| 3S4              | .30  | .20  | .44  | .22  | .69  | .23  | .76  | .14  | .95  | .06  | 7.83                               | 2.65 |
| 3S5              | .26  | .14  | .37  | .29  | .63  | .12  | .79  | .11  | .92  | .05  | 7.19                               | 2.12 |
| 3S6              | .20  | .17  | .47  | .27  | .67  | .27  | .78  | .14  | .91  | .08  | 7.33                               | 2.94 |
| 3S7              | .24  | .08  | .39  | .20  | .64  | .14  | .80  | .12  | .91  | .11  | 7.21                               | 1.65 |
| Grade 5 Chinese  |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 5C1              | .40  | .26  | .56  | .21  | .67  | .16  | .82  | .12  | .92  | .07  | 8.80                               | 2.52 |
| 5C2              | .69  | .27  | .81  | .29  | .87  | .28  | .95  | .09  | .93  | .12  | 12.12                              | 3.48 |
| Grade 5 Hispanic |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 5S1              | .48  | .19  | .62  | .25  | .85  | .15  | .92  | .10  | .93  | .05  | 10.20                              | 2.22 |
| 5S2              | .61  | .20  | .72  | .16  | .73  | .20  | .77  | .12  | .94  | .08  | 10.59                              | 2.20 |

A comparison of the relative rankings of third grade classes on comprehension and production shows that two of the three third grade classes that were highest in production, ranked relatively low in comprehension. One of them (3C5) just missed being on the list of the lowest ranked classes in comprehension. Only 1 class (3C6), the highest of the 13 third grade classes overall, was equally high in both comprehension and production:

| Class | Rank in Prod. | Rank in Comp. |
|-------|---------------|---------------|
| 3C1   | (9)           | 3             |
| 3C4   | (5)           | 2             |
| 3C5   | 2             | (10)          |
| 3C6   | 1             | 1             |
| 3S5   | 3             | (9)           |

Of the four classes that were the lowest of the thirteen third grade classes in beginning comprehension and production, three were ranked almost equally low by both measures of proficiency:

| Class | Rank in Prod. | Rank in Comp. |
|-------|---------------|---------------|
| 3C2   | (10)          | 12            |
| 3C3   | 13            | 11            |
| 3S2   | 11            | (5)           |
| 3S3   | 12            | 13            |

A comparison of these classes listed indicates that four of the five highest classes were Chinese and one was Hispanic, while the four lowest classes were equally divided between Hispanic and Chinese. Two of the five highest classes were bilingual and the remaining three, English monolingual, while all four of the lowest ranked classes were bilingual. One might be tempted to conclude from the foregoing that

the Chinese classes were better in acquiring English than the Hispanic, and the English monolingual classes were doing a better job than the bilingual ones in helping the LEP students pick up English. That, however, would be an oversimplification of the differences between the classes at the top and the bottom.

The greater exposure that the students in the monolingual classes have had to the use of English in instruction apparently does give them a slight edge over the students in bilingual classes, at least in picking up English. It should be noted, however, that the differences between classes were not great, and thus the academic benefits of receiving bilingual instruction may nevertheless outweigh the advantage that monolingually instructed students enjoy by picking up English just a little bit faster. Actually, the differences in beginning English proficiency that we found between bilingual and monolingual classes may be associated more with their instructional and situational characteristics than with the kind of program they happened to be. The English monolingual classes, as a rule, had smaller concentrations of LEP students in them, and this generally meant that there were more opportunities for the ones that were there to interact with English speaking classmates. We shall see that this was a variable that had a major effect on the development of productive aspects of proficiency during the year of the study.

Even more critically, a number of instructional variables may have been involved in determining which classes were high to begin with, and which were low. We cannot, of course, say much about them with regard to the levels of English proficiency our students had as

the study began since we were not able to observe the classroom programs our subjects had experienced prior to the year we studied them. We will, however, do so with respect to the changes we found taking place in their levels of proficiency during the study year, and there is no reason to believe that the instructional variables that influenced language development during that year would be greatly different than those that influenced development in previous years. But while we can say nothing very specific about the instructional treatments that might account for the differences we found in beginning levels of English proficiency, there are some observations we can make about the prior educational experience of our subjects related to situational differences that could be seen between the highest and the lowest classes.

Let us consider the classes that began the study year with the highest levels of English proficiency. What were they like, as a group, and how do they differ from the classes that began with the lowest proficiency? Some of the differences between them may be attributable to situational differences found in the school and community settings of these classes. Looking at the highest classes, we find that three of the five were in the same school (3C4, 3C5, and 3C6). There was one other class from this school in the study, this one a fifth grade (5C2), and it too would have been on the list had a single ranking of third and fifth grade classes been possible. (It was not done since the z-scores on which the rankings were based were computed separately for the two grade levels.) Only one of the four classes we had in this school was bilingual (3C4); it the only bil-



ingual third grade in the school. There was only one other third grade class (another all-English one) in the school, but it was not included in study because there were fewer students in it who met our subject selection criteria than in the others three classes. There was a bilingual fifth grade class at the school, but that teacher was suffering from research fatigue (having participated in another study the previous year) and did not feel that she handle another year of microscopic examination, nor of researchers constantly underfoot. Had we recruited that class as well, it

no doubt would have been on our list alongside the all-English fifth grade class we did get. It mattered less that these classes were monolingual or bilingual than that they were classes in this school, we think.

The school itself was one that had a very large concentration of Asian students, most of them Chinese. It would be difficult to know for certain what factors contributed most to the English language performance of the students in this school, but certain characteristics of the school seem to be important ones. The teachers in the school were, as a group, very academically oriented. The school was considered by parents and teachers alike to be a desirable one: there were rumors that some of the students at the school lived outside its attendance area but were there because their parents were using "phony" home addresses; teachers in other schools in the district were said to be willing to accept changes in grade level assignments in exchange for transfers to this school. The school was regarded as "easy duty" for teachers: it provided teachers with a hassle-free work

environment where they could really teach successfully. The secret to their success, of course, was the children. Most of them were eager and hard-working; they plugged away at their assignments, and generally did well in school despite serious language problems which sometimes prevented these students from understanding very much of what they were "learning".

It didn't seem to bother the children when they did not understand things as long as they were "busy working" at them, and completing their assignments. Our observations of these children gave us some fascinating insights into the value of perseverance and practice. Some of the non-English speakers, for example, worked for hours each day on exercises that could have had little meaning for them. They sometimes had little idea of the purpose of these exercises even, but that did not seem to affect their willingness to spend time working on them, nor on the amount of attention they gave to such tasks. It was as if they understood that by hardwork and perseverance, they would eventually succeed, no matter how impossibly difficult things seem at first. In this, they generally reflected their parents attitudes on work and education. While the families served by this inner-city school were largely low income, they were oriented to school success, and the parents were extremely supportive of the school's programs and of their children's teachers. Whatever the teachers did or asked was right, so far as the parents were concerned. They did not, as a rule, serve as volunteers in the classrooms; few of them had the education or the English language skills that might have given them the confidence to think about that.

There was throughout this school, a heavy emphasis on English. It had a large pull-out ESL program which gave students needing such instruction a fifty minute period of ESL four times each week. The teachers provided additional language instruction in many of the classes we visited in the school. Some of this was given as language arts instruction, and some in connection with reading. The teachers in the bilingual classes (the one we studied, and the ones we visited at other grade levels) generally placed as great an emphasis on the development of English skills as did the teachers in the all-English classes we studied. The only way in which these classes differed from the all-English ones was that Chinese reading and writing were taught in addition to everything else in the bilingual classes. Despite this, the school staff was quite divided on the question of bilingual education; those who opposed it tended to voice their objections to bilingual instruction on the grounds that the teaching of L1 literacy hinders the development of English skills. There was no evidence whatsoever that supported that argument, at least at this school. The students in the bilingual classes performed just as well as the students in the all-English classes did, judging from the CTBS scores shown to us by the district. Interestingly, many of the students in the bilingual and the all-English classes alike were attending a Chinese school each day after school, and they were being taught to read and write Chinese there. The students in the all-English classes were not missing out on Chinese literacy by being where they were, just as the students were not missing out on English in the least by being in bilingual classes.

The situation for the remaining Chinese class was much the same as the one described for the other three. It was in a different school and district, but the situation was quite similar to that at the other. Not only was the school environment similar to that of the school housing the other three Chinese classes, the instructional experience for this class had been much the same as for the others. This school was much more of a bilingual school than the other; instead of just one bilingual class at each grade level as in the other, there were three or four at this school. But here as well, English was the predominant language of instruction, and it was heavily promoted by all of the teaching staff. While we did note differences among the teachers we observed at this school, English was by far the language that was the most frequently used by teachers and students alike.

It seems clear to us in comparing the highest and the lowest classes that school setting and family variables such as these can be major influences on the learning of English by LEP students. But these situational factors are just a few of the variables that influence the development of second language skills. The kind of skills children acquire, and the applicability of those skills to schoolwork depend very much on the kind of instructional experiences that led to their acquisition in the first place. The unevenness of development that we see when the ratings in production are compared to those in comprehension for four of the five highest classes suggests some interesting possibilities in the ways in which the prior instructional experiences of these classes differed in specifics. Two of the 4 (3C1

and 3C4) are ranked relatively higher in comprehension than in production; the other two (3C5 and 3S5) are lower in comprehension than production. We have reason to believe that patterns of uneven development as we see here are directly related to the structure of the instructional programs that children have been in, and the nature of the instructional practices that their teachers engaged in. One of the more intriguing findings in looking at the relative rankings of our classes in beginning of the year and end of the year levels of proficiency was that the situations for these two pairs of classes became reversed over the course of the year during which we observed them. This reversal, we believe, is directly related to the kinds of instructional approaches taken by the teachers in those classes, but that we will save our discussion of what those were until we discuss the changes that took place over the year in language proficiency (see Sections 4.4).

Let us look for now at the classes that ranked lowest in initial oral language proficiency, since they provide an interesting contrast to the highest classes. It was noted earlier that all of the classes that were lowest in beginning language proficiency were bilingual ones. Three of them were poor both in production and in comprehension. One of them (3S3) was a Hispanic class, and the other two (3C2 and 3C3) were Chinese. The remaining class (3S2), a Hispanic bilingual one, was low in production, but quite high in comprehension. What were these classes like as a group?

The two Chinese classes were alike in that they each had a larger number of newly arrived NES students than any of the classes in the

Chinese sample (38.5% of the students in 3C2, and 35.7% in 3C3 were either NES or had had a year or less of English by the beginning of the study year). They were at different schools and in different districts. Both schools were located at the fringes of ghetto areas. The children in 3C3 were bussed from the city's Chinatown area to the school which was in a neighborhood consisting largely of low-income public housing. The children who lived in the neighborhood were mostly black, but the school itself was more or less integrated through the busing program which brought Hispanic and Asian children to it from other districts of the city. The school that housed 3C2 had a very similar ethnic composition.

The 3S3 Hispanic class had an extremely high proportion of Spanish L1 speakers (87.7% were Hispanic background, and all but a few of these children were predominantly Spanish-speaking, and 8.1% English monolingual Caucasians). The other Hispanic class was in the same urban school as one of the Cantonese classes just discussed, 3C2. 3C2 was the one "Chinese" bilingual class in the school, while 3S3 was the lone Hispanic bilingual third grade class there. Like the Chinese class, the Hispanic one was ethnically and linguistically mixed. It had, in fact, almost the same proportion of Hispanic and Black students (65.2% Hispanic, 30.4% Black) as the Chinese class had of Asian and Black students (69.2% and 26.9%).

What we have in the group of classes that were lowest in English proficiency at the beginning of the study, then, are two classes with very high concentrations of the language group served by the bilingual program, and two with a somewhat more ethnically and linguistically

mixed class composition. These apparent differences among the four classes might lead one to suppose that there was no one common situational factor that might account for why they were all so low in beginning English proficiency, or to suggest that since the one characteristic shared by them was that all four were "bilingual" classes, it was responsible for them being where they were. In fact, there was at least one other characteristic shared by these four classes, but it was not one that would have been detected had we not conducted intensive observations of the interactional patterns in all of our classrooms and in the schools in which they were located. The LEP children in all four situations were quite isolated from English speakers, despite the fact that in the case of three of them, a quarter or more of the students in the class were English monolinguals. There was, in the two urban schools, a fairly good ethnic and linguistic mix in the student-body as a whole, if not in the classes themselves. But in each case, the ethnic groups tended not to intermix, and indeed, not to have much contact with one another, even in class. 3C2 (the Chinese class that was bussed across town each day to school) was entirely isolated from the other children in the school. The Chinese children rarely mingled with the other children in the school yard. They were real "outsiders" there, linguistically, socially and culturally. The language differences would have made interaction difficult at best between these groups, but there were also enormous cultural differences that precluded even superficial interactions that might have led to the elimination of these linguistic differences.



The situation we observed at this school was of children who had no way of breaking the social and linguistic barriers that existed between them and the other children in the school. The black children were lively, exuberant, and completely at home in this school which was right in their neighborhood. The schoolyard was their turf: they played there before school, after school and no doubt on weekends as well. In this situation, the Chinese children were anything but lively and exuberant: they were strangers in foreign territory, and they did not seem to know how to relate to the other children in the school. There was no time before or after school for the groups to get together informally since the bus children arrived just in time for class in the morning, and they got on the bus immediately after they were dismissed each afternoon for the return ride across town to their own neighborhoods. At recess and after lunch each day, the Chinese children tended to bunch together in tight little knots right near the entrance to the building, so they could get back into their classrooms as soon as the bell signalled the end of the recess or lunch period. Their only exposure to English, as far as we could tell, came from teachers, and while their teachers emphasized the development of English, and they worked hard at helping the students acquire and use the language, their efforts met with limited success because the social situation in the school did not provide the students with much motivational support for learning or using it. This last was true also for the Hispanic children at the rural school. Most of the children there spoke Spanish, and while the teachers promoted English and it was the predominant language of instruction even in the bilingual classrooms, the children tended to use Spanish more frequently than



English.

In the other two classes, we observed essentially the same social and linguistic segregation of the LEP students from English speaking peers, this despite the fact that a quarter of the children in each class were English monolinguals. The children tended to isolate themselves socially and linguistically, even when their teachers took measures such as seating English speakers together with LEP students to try to break down the barriers between them. They would sit side by side peacefully enough, but rarely did they talk to one another, nor would they go out to recess together. At recess, the children would head for their own groups, and engage in the kind of activities they liked best with friends who were just like them, rather than to attempt to get to know the children who were different. Linguistic and social isolation of LEP students, whether self-imposed or not, is not conducive to good language learning, it appears.

#### 5.1.2. Posttest Data: Rock Game

Table 5.4 lists the mean and standard deviation by class and language group for scores for Well-Formedness, Grammatical Complexity, and Informativeness on the posttest measure, the Rock Game. Because of differences in the scales used in scoring the three production measures, we again converted all scores to z scores, again separating 3rd and 5th grade data. These z scores for the Rock Game are given in Table 5.5. The table also lists the total z score, obtained by summing the z scores for all three scoring categories.

Table 5.4

Production Scores by Class  
and Language Group  
on Posttest (Rock Game)

Mean and Standard Deviation

|                  | Well-Formedness |      | Grammatical Complexity |      | Informativeness |      |
|------------------|-----------------|------|------------------------|------|-----------------|------|
|                  | Mean            | S.D. | Mean                   | S.D. | Mean            | S.D. |
| Grade 3: Chinese |                 |      |                        |      |                 |      |
| 3C1              | 3.14            | .35  | 2.44                   | .36  | 2.07            | .33  |
| 3C2              | 3.00            | .36  | 2.17                   | .20  | 1.76            | .40  |
| 3C3              | 2.69            | .75  | 1.73                   | .82  | 1.25            | .60  |
| 3C4              | 3.17            | .20  | 2.49                   | .46  | 2.06            | .32  |
| 3C5              | 3.19            | .29  | 2.46                   | .43  | 2.09            | .28  |
| 3C6              | 3.11            | .26  | 2.56                   | .40  | 2.17            | .31  |
| Grade 3 Hispanic |                 |      |                        |      |                 |      |
| 3S1              |                 |      |                        |      |                 |      |
| 3S2              |                 |      |                        |      |                 |      |
| 3S3              |                 |      |                        |      |                 |      |
| 3S4              | 3.11            | .26  | 2.51                   | .46  | 1.86            | .41  |
| 3S5              | 2.91            | .42  | 2.41                   | .54  | 1.99            | .54  |
| 3S6              | 3.10            | .15  | 1.90                   | .05  | 1.60            | .24  |
| 3S7              | 3.39            | .30  | 2.02                   | .65  | 1.75            | .39  |
| Grade 5 Chinese  |                 |      |                        |      |                 |      |
| 5C1              | 3.18            | .19  | 2.23                   | .30  | 1.97            | .21  |
| 5C2              | 3.29            | .34  | 2.34                   | .51  | 2.16            | .35  |
| Grade 5 Hispanic |                 |      |                        |      |                 |      |
| 5S1              | 3.42            | .29  | 2.24                   | .53  | 1.88            | .37  |
| 5S2              | 3.30            | .19  | 2.55                   | .44  | 2.14            | .30  |

Table 5.5

Z-Scores for Production Items  
by Class and Language Group  
on Posttest (Rock Game)

Mean and Standard Deviation

|                   |  | Well-Formedness |      | Grammatical Complexity |      | Informativeness |      | Total |
|-------------------|--|-----------------|------|------------------------|------|-----------------|------|-------|
|                   |  | Mean            | S.D. | Mean                   | S.D. | Mean            | S.D. |       |
| Grade 3: Chinese  |  |                 |      |                        |      |                 |      |       |
| 3C1               |  | .15             | .66  | .28                    | .69  | .32             | .69  | .75   |
| 3C2               |  | -.12            | .68  | -.24                   | .38  | -.33            | .85  | -.69  |
| 3C3               |  | -.69            | 1.44 | -1.07                  | 1.57 | -1.40           | 1.38 | -3.16 |
| 3C4               |  | .20             | .39  | .38                    | .87  | .30             | .66  | .88   |
| 3C5               |  | .25             | .54  | .31                    | .81  | .37             | .58  | .93   |
| 3C6               |  | .10             | .53  | .50                    | .76  | .53             | .66  | 1.13  |
| Grade 3: Hispanic |  |                 |      |                        |      |                 |      |       |
| 3S1               |  | .19             | .52  | .33                    | .49  | .51             | .75  | 1.03  |
| 3S2               |  | -.48            | 1.78 | -.59                   | 1.35 | -.44            | 1.29 | -1.53 |
| 3S3               |  | -.04            | .98  | -.57                   | .88  | -.93            | .67  | -1.54 |
| 3S4               |  | .08             | .54  | .53                    | .79  | .19             | .83  | .80   |
| 3S5               |  | -.34            | .86  | .36                    | .93  | .46             | 1.11 | .48   |
| 3S6               |  | .05             | .31  | -.37                   | .08  | -.35            | .50  | -.67  |
| 3S7               |  | .66             | .62  | -.31                   | 1.12 | -.04            | .81  | .32   |
| Grade 5: Chinese  |  |                 |      |                        |      |                 |      |       |
| 5C1               |  | -.19            | .74  | -.17                   | .76  | -.28            | .74  | -.64  |
| 5C2               |  | .26             | 1.29 | .17                    | 1.30 | .39             | 1.22 | .82   |
| Grade 5: Hispanic |  |                 |      |                        |      |                 |      |       |
| 5S1               |  | .27             | 1.22 | -.35                   | 1.07 | -.41            | 1.07 | -.49  |
| 5S2               |  | -.22            | .77  | .29                    | .89  | .33             | .85  | .40   |

Table 5.6 shows the comprehension data for our subjects by class and language group. Again the data are in the form of percentages of correct responses to items of varying degrees of difficulty (Category V is the most difficult and Category I is the least). The table also shows a Weighted Comprehension Score obtained by the formula:

$$5 (\% V) + 4 (\% IV) + 3 (\% III) + 2 (\% II) + (\% I)$$

## 5.2. Oral Language Gains Related to Instructional Variables

The next step in our analysis was to determine what relationship, if any, existed between our dependent variables, the measures of oral language gain in production and comprehension, and our independent variables, the various instructional features that we had coded. It should be recalled at this point that there were two general types of instructional features--those that we called Instructional Language variables and those that we called Instructional Practice variables.

### 5.2.1. Correlational Data

The correlational data were disappointing. We failed to find strong relationships between our dependent variables and either the sets of Instructional Language or the Instructional Practice variables. In fact, of the 11 combined variables related to Instructional Language Use, only two showed some significant correlations with our dependent measures. Of the 14 clusters of Instructional Practice

Table 5.6

Comprehension Data:  
Percent Correct Responses  
to Items of Varying Degrees of Difficulty  
by Class and Language Group  
on Posttest (Rock Game)

Mean and Standard Deviation

| Category:        | V    |      | VI   |      | III  |      | II   |      | I    |      | Weighted<br>Comprehension<br>Score |      |
|------------------|------|------|------|------|------|------|------|------|------|------|------------------------------------|------|
|                  | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean                               | S.D. |
| Grade 3 Chinese  |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 3C1              | .10  | .12  | .32  | .19  | .58  | .22  | .66  | .26  | .93  | .05  | 5.90                               | 1.54 |
| 3C2              | .10  | .10  | .38  | .22  | .63  | .28  | .66  | .38  | .92  | .13  | 6.11                               | 2.00 |
| 3C3              | .04  | .06  | .19  | .22  | .40  | .24  | .45  | .37  | .67  | .41  | 3.73                               | 2.37 |
| 3C4              | .02  | .05  | .35  | .15  | .60  | .19  | .71  | .15  | .93  | .08  | 5.64                               | 1.46 |
| 3C5              | .06  | .10  | .43  | .22  | .58  | .21  | .64  | .35  | .99  | .03  | 6.01                               | 1.70 |
| 3C6              | .06  | .11  | .59  | .22  | .55  | .32  | .79  | .29  | .97  | .05  | 6.87                               | 1.61 |
| Grade 3 Hispanic |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 3S1              | .05  | .07  | .36  | .29  | .63  | .17  | .68  | .26  | .99  | .04  | 5.94                               | 1.79 |
| 3S2              | .03  | .08  | .34  | .28  | .62  | .30  | .84  | .11  | .99  | .04  | 6.06                               | 2.30 |
| 3S3              | .00  | .00  | .07  | .09  | .37  | .19  | .56  | .38  | .93  | .16  | 3.44                               | 1.13 |
| 3S4              | .05  | .10  | .30  | .29  | .58  | .19  | .72  | .25  | .92  | .08  | 5.56                               | 2.09 |
| 3S5              | .02  | .05  | .46  | .31  | .70  | .23  | .65  | .40  | .96  | .05  | 7.16                               | 2.12 |
| 3S6              | .00  | .00  | .14  | .07  | .52  | .11  | .71  | .08  | .83  | .11  | 4.39                               | .60  |
| 3S7              | .02  | .05  | .25  | .14  | .51  | .26  | .63  | .30  | .97  | .03  | 4.87                               | 1.47 |
| Grade 5 Chinese  |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 5C1              | .08  | .07  | .40  | .29  | .76  | .19  | .45  | .45  | .99  | .02  | 6.16                               | 1.53 |
| 5C2              | .11  | .14  | .54  | .33  | .69  | .19  | .62  | .39  | .98  | .03  | 7.02                               | 1.70 |
| Grade 5 Hispanic |      |      |      |      |      |      |      |      |      |      |                                    |      |
| 5S1              | .01  | .04  | .44  | .28  | .70  | .17  | .45  | .44  | 1.00 | .00  | 5.85                               | 1.77 |
| 5S2              | .07  | .12  | .51  | .16  | .69  | .12  | .60  | .39  | .93  | .02  | 6.64                               | 1.08 |

variables, none correlated significantly with any of our dependent measures of language gain.

The two variables that did show a relationship to our dependent variables were "Built in Interaction Opportunities" (e.g., opportunities for peer teaching or group work) and "Practice in English with Peers" (e.g., the extent to which the LEP students actually did interact with English speaking classmates). The first of these variables correlated significantly with all four measures of gain in language production:

|     |   |
|-----|---|
|     | .67 with Gain in Well-Formedness        |
|     | .68 with Gain in Grammatical Complexity |
|     | .66 with Gain in Informativeness        |
| and | .82 with Total Gain Score               |

Each of these correlations was significant beyond the .01 level. However, this independent variable did not correlate significantly with any of our measures of comprehension gain.

Similarly, "Practice in English with Peers" correlated significantly with all four measures of gain in language production:

|     |   |
|-----|---|
|     | .69 with Gain in Well-Formedness        |
|     | .66 with Gain in Grammatical Complexity |
|     | .75 with Gain in Informativeness        |
| and | .80 with Total Gain Score               |

Each of these correlations was significant beyond the .01 level. Again, this variable showed no relationship to our measure of gain in comprehension.

These findings suggest that the opportunity to interact with peers in English and actual interaction are strong predictors of gains in productive ability, although such opportunities and actual interaction did not seem to relate to gains in comprehension.

It occurred to us that perhaps our dependent measures of production were masking significant findings. Specifically, we wondered if some subjects' scores were inflated by their doing well on easy items. We therefore looked only at more difficult items and recoded for each subjects' score for Well-Formedness, Grammatical Complexity, and Informativeness using the 12 most difficult items on the Shell Game and the 15 most difficult items on the Rock Game. By most difficult in this context we mean those items that must be answered by more than a few words--e.g., items that required children to describe properties of items or to clarify the meaning of terms or to compare features of items with each other. It turned out, however, that the correlations between the total test (all items) and the score on the most difficult items was over .90 for each of the three production measures for both Shell and Rock Game. This attempt to make sense of our data led nowhere.

At this point, the paucity of significant correlations between our independent and dependent variables was discouraging. It turned out, however, that the relationship between our measures was more complex (and more interesting) than we had anticipated. This became evident as we carried out more detailed analyses of the data.

### 5.2.2. Differences between Groups of Children

The correlational analyses were based on the 17 classrooms in our sample. Because we were looking at the ratings we had made for teachers in the various classrooms, we were forced to use the mean scores on the dependent variables in the correlational analyses. This was a wasteful use of our data. We began to think of ways to use the individual scores of all of our subjects.

The first attempt in this direction involved categorizing our subjects into those in classes high on a given variable and those in classes low on that variable. For example, we compared children in those classes where teachers provided good input for language learning with those in classes where teachers' input was not as good. The statistical analysis was carried out via a t-test with the various comprehension and production measures as the dependent variables. The same procedure was carried out for other independent variables.

It soon became apparent that our findings using the t-tests were mirroring the findings we had obtained via correlational procedures. By and large, there were no significant differences between groups. Where there were differences, these tended to be the same as we had found in the correlational analyses. We began to wonder if our independent variables were not interacting in a complex way with other variables.

Was it possible, we asked, that children who have poorer language proficiency in English at the beginning of the year require different teaching strategies than those who begin with more skills in English?



Perhaps some of the variables we were looking out--good teacher input, feedback, teaching that focused on structural aspects of language, etc--were more important for students with poorer initial proficiency. Perhaps some teaching practices affected these children positively, whereas other variables affected children with greater initial proficiency. If so, we would have an explanation for why many of the variables we thought were important in second-language learning were not significant in our correlational analyses. Put simply, certain teaching practices may have affected some students one way and other students another way, with the result that nothing was showing up in our analyses.

What we began to consider, then, were interaction effects--specifically, Aptitude by Treatment interactions. The appropriate statistical design was a 2 x 2 Analysis of Variance. Because we had non-categorical data on our two independent variables, we did not use the traditional 2 x 2 factorial approach, but rather a regression analysis.

### 5.3. Summary Variables

We began by breaking down our independent variables somewhat. Because we had only 17 classrooms and 14 Instructional Practice variables and 11 Language Use variables, a factor analysis was not appropriate. We decided instead to group our variables logically and to determine their degree of association by means of Cronbach's alpha. After some experimentation, we came up with four summary factors:

QUALITY OF TEACHING: The sum of the z-scores for the following Classroom variables:

- Good Teaching
- Peer Interaction on Schoolwork
- Variety of Teaching Models
- Structural Aspects of Language Taught
- Individualized Help
- Informative Help
- Responses Required and Modeled
- Opportunities for Oral Participation

QUALITY OF LEARNING ENVIRONMENT: The sum of the z-scores for the following Instructional Practice variables:

- Low Noise Level
- Low Teacher Distractability
- Learning Centered Behavior Promoted

QUALITY OF INSTRUCTIONAL LANGUAGE: The sum of the z-scores for the following Instructional Language variables:

- Good Input from Teacher
- Appropriately Adjusted Content
- Structural Support for Input
- Useful Feedback Provided by Teachers
- Practice in Using English in Lessons
- Total Practice in English

INTERACTIONAL OPPORTUNITIES: The sum of the z-scores for the following Language Use variables:

- Interaction Opportunities Built in
- Practice in English with Peers

The value of Cronbach's alpha for these summary values was:

|                                   |     |
|-----------------------------------|-----|
| QUALITY OF TEACHING               | .92 |
| QUALITY OF LEARNING ENVIRONMENT   | .87 |
| QUALITY OF INSTRUCTIONAL LANGUAGE | .94 |
| INTERACTIONAL OPPORTUNITIES       | .84 |

#### 5.4 The Effect of Initial Proficiency Level and Cultural

## Background

We computed a number of regression analyses to test for interaction effects between these summary variables and level of initial ability. For production dependent variables we used the Total z-score for Shell Game items as the measure of level of initial ability. For comprehension dependent variables we used the Weighted Comprehension Score for the Shell Game. We first entered into the regression analysis this measure of initial ability, then the score of the child's classroom on the summary variable, and then their interaction.

Table 5.7 shows the variables on which we found significant interaction effects. Of our dependent measures, only the difference between comprehension scores on Shell V and Rock IV categories was not significant. All other measures showed large interaction effects, suggesting that level of initial ability was indeed interacting with our summary variables.

### 5.4.1. Production Dependent Variables

Analysis of the interactions revealed a fairly complex picture. If we look at our production dependent variables first, we find that the effects for INTERACTIONAL OPPORTUNITIES was quite consistent with what we would expect from the correlational data. Because this summary variable was composed of two variables ("Interaction Opportunities Built in" and "Practice in English with Peers") that correlated positively with gains on our oral production dependent variables, we

Table 5.7

Significant Interaction Effects  
from Regression Analyses  
for Summary Variables

(Initial Ability x Summary Variable)

| Variable                                | <u>Production</u> |     |       |       | <u>Comprehension</u> |             | WT |
|---|-------------------|-----|-------|-------|----------------------|-------------|----|
|   | W-F               | G-C | Info. | Total | Diff<br>5-4          | Diff<br>4-3 |    |
| QUALITY OF<br>TEACHING                  | **                | **  | *     | **    | --                   | **          | ** |
| QUALITY OF<br>LEARNING<br>ENVIRONMENT   | **                | **  | *     | **    | marg.                | **          | ** |
| QUALITY OF<br>INSTRUCTIONAL<br>LANGUAGE | **                | **  | marg. | **    | --                   | **          | ** |
| INTERACTION<br>OPPORTUNITIES            | **                | **  | **    | **    | marg.                | **          | ** |

marg. =  $p < .10 > .05$

=  $p < .05$

\* =  $p < .01$

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were not surprised to find that children performed better on these measures of gain when they were in classes that were rated high on this summary variable. What was more interesting, however, was the interaction effect. What the data showed was that the effects of INTERACTIONAL OPPORTUNITIES was greatest for children who were poorest in initial ability.

To show the relationship between initial level of ability and the summary variable, we divided our subjects into quartiles on the basis of their initial level of ability (in this case the Total z-score for Shell Game items). We then divided the subjects into those who were in classes scoring high on the summary variable and those in classes rated low. The result is a 4 x 2 table. The example for INTERACTIONAL OPPORTUNITIES for the Total z-score gain dependent variable (obtained by adding the z-score gains for Well-Formedness, Grammatical Complexity, and Informativeness): There are roughly 20 subjects per cell in the above table.

|                       | INTERACTIONAL OPPORTUNITIES |       |
|-----------------------|-----------------------------|-------|
|                       | High                        | Low   |
| LEVEL INITIAL ABILITY |                             |       |
| Top Quartile          | -.55                        | -.130 |
| 2nd Quartile          | .31                         | -.16  |
| 3rd Quartile          | .26                         | .02   |
| Lowest Quartile       | 1.46                        | -.42  |

It can be seen that the subjects who are lowest in initial ability show the greatest gains overall (presumably because they have the greatest potential for gain and because subjects in the top quartile have a tendency to regress to the mean). What surprised us, however, was that the difference as a result of being in classes high or low on INTERACTION OPPORTUNITIES was greatest in the lowest quartile. That is, the children who start off poorest gain the most from having the opportunity to and actually interacting in English with peers.

When we looked at our other summary variables, however, we found that a quite different pattern was emerging. Again, differences between children in classes scoring high and low on the variables was greatest for the children lowest in initial ability. But the results were in the opposite direction to what we expected. That is, for our QUALITY OF TEACHING, QUALITY OF LEARNING ENVIRONMENT, and QUALITY OF INSTRUCTIONAL LANGUAGE variables children in the lowest quartile performed worse on the gain variables, by and large, when their classes were rated high on these summary variables.

We were puzzled by these findings. One possibility was that those classes that scored high in INTERACTIONAL OPPORTUNITIES scored low on the other variables. Indeed, we ran the intercorrelations between the summary variables and found that INTERACTIONAL OPPORTUNITIES correlated negatively with QUALITY OF LEARNING ENVIRONMENT and not at all with the other two summary variables. QUALITY OF LEARNING ENVIRONMENT, QUALITY OF TEACHING, and LANGUAGE QUALITY all correlated significantly with each other. Thus it appeared that if there is a great deal of opportunity for children to interact in the class, there

might be less likelihood of teachers spending time on structured aspects of language teaching. Children may learn to speak English best in those classes where they have opportunities to interact and not in those classes where teachers spend more time teaching the structural aspects of the language.

We began to wonder if there might be a difference between our Chinese and our Hispanic students in this respect. To determine if this was the case, we broke up our data further, dividing our groups on the basis of ethnicity as well. When we did this, we found that Hispanic children who were in the lowest quartile showed greater gains than their Chinese counterparts when the class was rated high in INTERACTIONAL OPPORTUNITIES: These data are for Total z-score gains for production and the cell size is roughly 10.

Furthermore, we found that for the QUALITY OF LEARNING ENVIRONMENT variable, Chinese subjects in the lowest quartile performed better the higher the class rating, whereas for Hispanic subjects the opposite was the case. The data for Total z-score gains for production are as follows:

On the QUALITY OF INSTRUCTIONAL LANGUAGE and QUALITY OF TEACHING variables there were relatively small differences among subjects in the lowest quartile for Chinese subjects, but large differences for Hispanic children. All subjects, but especially our Chinese children, in the intermediate range of initial ability seemed to show greater gains when classes were rated high on these summary variables (as they did with the QUALITY OF LEARNING ENVIRONMENT variable).

# INTERACTIONAL OPPORTUNITIES

(Chinese Children)

|                       | High | Low   |
|-----------------------|------|-------|
| LEVEL INITIAL ABILITY |      |       |
| Top Quartile          | -.82 | -1.04 |
| 2nd Quartile          | .75  | -.30  |
| 3rd Quartile          | -.23 | .16   |
| Lowest Quartile       | 1.19 | -.22  |

(Hispanic Children)

|                       | High | Low   |
|-----------------------|------|-------|
| LEVEL INITIAL ABILITY |      |       |
| Top Quartile          | -.17 | -1.46 |
| 2nd Quartile          | .04  | .02   |
| 3rd Quartile          | .69  | -.14  |
| Lowest Quartile       | 1.65 | -.55  |



# QUALITY OF LEARNING ENVIRONMENT

(Chinese Children)

|                       | High | Low  |
|-----------------------|------|------|
| LEVEL INITIAL ABILITY |      |      |
| Top Quartile          | -.99 | -.82 |
| 2nd Quartile          | .26  | -.21 |
| 3rd Quartile          | .29  | -.41 |
| Lowest Quartile       | .90  | .59  |

(Hispanic Children)

|                       | High  | Low  |
|-----------------------|-------|------|
| LEVEL INITIAL ABILITY |       |      |
| Top Quartile          | -1.29 | -.97 |
| 2nd Quartile          | .01   | .06  |
| 3rd Quartile          | .50   | -.08 |
| Lowest Quartile       | -.01  | 1.83 |

To summarize, our reading of these data is that all of the children in our sample profited with respect to their oral productive abilities in English if they could interact with native speaking peers, but that this was more the case with children who were low in initial ability and, in this group, especially with Hispanic children. The Chinese children appeared to profit more from structured, relatively noise-free environments, and at the intermediate level of initial ability, from good language teaching and high quality of language input.

#### 5.4.2. Comprehension Dependent Variables

Turning now to the measures of gain in comprehensive skills, we note first that there were no significant interactions for gains on the most difficult items. By most difficult we are referring to the difference between category IV on the Rock Game and V on the Shell Game. This indicates that there were no differences between subjects in how they were affected by our independent variables as a function of initial level of ability (as measured by Weighted Comprehension score on the Shell Game). Subjects at all levels of initial ability showed just about the same gains whether they were in classes high or low on our summary variables. There was some indication that subjects at the intermediate level of ability gained more on this dependent measure when they were in classes rated high for QUALITY OF LEARNING ENVIRONMENT and LANGUAGE QUALITY and worse when they were in classes high on INTERACTIONAL OPPORTUNITIES. But since the interaction effects were not significant in our regression analysis, we were not sure of the stability of these findings.

When we looked at the gain difference between items of moderate difficulty (category III on the Rock Game and IV on the Shell Game), we found significant interaction effects in the regression analyses (Table 5.7). This was also true for the gains in Weighted Comprehension score. Because the pattern of results was almost identical on these two measures, we will limit our discussion here to the Weighted Comprehension measures.

On the QUALITY OF TEACHING variable, the results indicated that subjects in the upper two quartiles (the children who were better initially in their comprehension) showed greater gains when they were in classes rated high on this summary variable. Children who were poorer initially showed greater gains when they were in classes rated lower on the QUALITY OF TEACHING variable. This was more true of Chinese than Hispanic children, however. Indeed, the interaction effect could be attributed entirely to Chinese children, as the Hispanic children consistently (over all levels of initial ability in comprehension) did better when they were classes rated higher in QUALITY OF TEACHING: These scores are for gain in Weighted Comprehension from Shell to Rock Game with about 10 subjects in each cell.

On the QUALITY OF LEARNING ENVIRONMENT and QUALITY OF INSTRUCTIONAL LANGUAGE variables there was a similar pattern. Inspection of the data by ethnic group revealed that Hispanic children at all levels of initial ability gained in their comprehensive skills when they were in classes rated high on these variables. This was the case for Chinese children with high or intermediate ability levels, but not for Chinese children with low initial ability. Children in this last category did best when their class was rated low on these variables.

On the INTERACTIONAL OPPORTUNITY variable we found a general tendency for all of our children at all levels of ability to show greater comprehension gains when the classes were rated low on this summary measure. The exceptions were Hispanic children at the highest or lowest levels of initial ability: these children showed greatest gains the more opportunities for interaction they had:

# QUALITY OF TEACHING

(Chinese Children)

|                       | High | Low   |
|-----------------------|------|-------|
| LEVEL INITIAL ABILITY |      |       |
| Top Quartile          | 5.79 | 6.27  |
| 2nd Quartile          | 8.08 | 8.03  |
| 3rd Quartile          | 8.55 | 8.67  |
| Lowest Quartile       | 9.20 | 10.53 |

(Hispanic Children)

|                       | High | Low  |
|-----------------------|------|------|
| LEVEL INITIAL ABILITY |      |      |
| Top Quartile          | 6.19 | 5.68 |
| 2nd Quartile          | 7.60 | 7.31 |
| 3rd Quartile          | 8.55 | 8.43 |
| Lowest Quartile       | 9.54 | 9.11 |

# INTERACTIONAL OPPORTUNITIES

(Chinese Children)

|                       | High | Low   |
|-----------------------|------|-------|
| LEVEL INITIAL ABILITY |      |       |
| Top Quartile          | 5.73 | 6.31  |
| 2nd Quartile          | 7.93 | 8.21  |
| 3rd Quartile          | 7.66 | 9.27  |
| Lowest Quartile       | 9.17 | 10.15 |

(Hispanic Children)

|                       | High | Low  |
|-----------------------|------|------|
| LEVEL INITIAL ABILITY |      |      |
| Top Quartile          | 6.38 | 5.52 |
| 2nd Quartile          | 7.26 | 7.61 |
| 3rd Quartile          | 7.76 | 9.18 |
| Lowest Quartile       | 9.60 | 9.10 |

The picture for Hispanic children seemed relatively clear. These children appeared to gain in comprehension when they were in classes rated high on QUALITY OF INSTRUCTIONAL LANGUAGE, QUALITY OF TEACHING, and QUALITY OF LEARNING ENVIRONMENT. Classes low on these variables (which often scored high on INTERACTIONAL OPPORTUNITIES) did not promote comprehension skills to the same extent for these children, although opportunities for interaction with English-speaking peers did seem to help children highest in initial comprehension skills and those initially poorest in comprehension.

The findings for our Chinese children were more difficult to interpret. Which factors lead to gains in comprehension for these children? We went back to some of the variables that made up the summary variables to see if looking at individual independent variables helped our understanding. We ran regression analyses on all of the Language Use variables and some of the Classroom variables.

Only a few of our variables seemed to affect comprehension gains for the Chinese children, but these constituted an interesting pattern. The Chinese subjects did not seem to gain more in their comprehension skills the more they interacted with native speaking peers. But "Practice in English in Formal Lessons" in which students worked under the guidance of teachers or teacher aides did lead to higher gains, especially for those who were poorer initially (the bottom two quartiles). For these children, both the scores on the moderately difficult items and the Weighted Comprehension scores were statistically significant ( $ps < .01$  and  $.05$  respectively).

Two other variables showed a similar pattern. The first was "Extended Responses Required and Modeled," which referred to the situation in which teachers frequently required extended oral responses (rather than single word or phrasal responses) in framing their elicitation questions, and assisted students in producing such responses by providing models and expansions for them as needed. The second variable was "Opportunities for Oral Participation" in which teachers frequently required students to respond orally during instructional activities. In both cases, Chinese (but not Hispanic) students at the lower levels of initial ability did especially well in

their gain scores for moderate items and Weighted Comprehension when their teachers were rated high on these dimensions.

We also ran correlations between our independent and depend variables separately for Chinese and Hispanic children (the three correlations are for gains on comprehension of difficult items, gains on comprehension on items of moderate difficulty and Weighted Comprehension Score):

Thus Chinese students tolerated teacher distractability less, did better on comprehension of moderately difficult items when they were in classes in which they received a great deal of independent help, and generally performed better the greater the time spent in class for teacher directed instruction than in individual seatwork.

The findings for the Hispanic students were, in many respects, much easier to interpret than were the findings for the Chinese. The Hispanic students clearly profited from opportunities to interact with peers, from quality teaching, and from exposure to quality instruc-

|                               | Chinese |        |        | Hispanic |     |      |
|-------------------------------|---------|--------|--------|----------|-----|------|
| "Teacher Distractability"     | .01     | -.32** | -.27** | .04      | .03 | -.06 |
| "Individual Help Given"       | .05     | -.28*  | .16    | .04      | .10 | -.01 |
| "Time in Teacher Directed"    | -.01    | .36**  | .25**  | .17      | .15 | .01  |
| "Time in Individual Seatwork" | -.02    | -.28*  | -.22*  | -.04     | .00 | .09  |

\* p < .05      \*\*<.01

tional language. The more opportunities they were given to work and interact with peers in the target language, the greater their gains in English production and in comprehension. Similarly, quality of teaching and instructional language were influential on the development of both production and comprehension skills. The quality of the learning environment, however, was negatively related to the gains in production scores for Hispanic students, but positively related to gains in comprehension scores. Even these seemingly contradictory findings are entirely consistent with the overall pattern for the Hispanic students. One major factor in the "QUALITY OF LEARNING ENVIRONMENT" summary variable was Low Noise Level. The classes which were low on noise level were ones in which there was relatively little peer interaction--something, as we have seen, Hispanic students apparently need, especially for the development of production skills in the target language. When they were in classes that were rated high on the QUALITY OF LEARNING ENVIRONMENT, the students gained in comprehension, but not in production. This would suggest that Hispanic students would profit from a balance between interactive learning activities and teacher supervised learning activities. There should be some time each day when the classroom environment is quiet enough that the students can easily hear what teachers are saying.

The patterns of findings for the Chinese students in the study were more difficult to interpret. Their performance in classes that were rated high in variables that were quite important for the Hispanic students was, often enough, not greatly different than in classes that were rated low on them. The only strongly positive rela-



tionships we seemed to be able to find between their outcome scores in oral language development and in our independent variables were on relatively general factors such as "Percent Time in Teacher Directed Instruction" (positively related to gains in comprehension for everyone), and "Opportunities to Interact with Peers in English" (weakly related to gains in production, overall). As we have seen, in general, the Chinese students made gains in oral language development when they found themselves in quiet, work-oriented classroom environments in which teachers created opportunities for them to practice using the language, and provided them with help and guidance in its use. This would suggest that teachers were particularly important to this group of students, and that teacher differences on the two sets of variables that were directly related to what teachers said and did while working with students should greatly affect their performance. But this turned out not to be the case. They were apparently not as affected by differences in QUALITY OF INSTRUCTIONAL LANGUAGE or in QUALITY OF TEACHING as the Hispanic students were.

The Chinese students performed well when they were taught by teachers who were rated high on such variables, but they did not do so poorly when they were taught by teachers who were rated low. In trying to interpret this apparently unsatisfying finding, we returned to the video machines for a closer examination of our classroom data. This time we compared taped lessons from Chinese classes that were rated high on QUALITY OF INSTRUCTIONAL LANGUAGE and QUALITY OF TEACHING variables with ones from classes that were rated low on them. For good measure, we did the same with selected lessons from a sample of

the Hispanic classes. We paid close attention to student response during lessons that would have earned high ratings on various dimensions of these two large summary variables. What we found helped us make sense of these quite different patterns of performance. The Hispanic students behaved as we might predict, given the relationships that were found between quality of instructional language usage, quality of teaching and language learning outcomes. When their teachers were using language well and were doing quality teaching, the students participated enthusiastically in instructional activities. When the teachers were not clear, or when they were confused or confusing, the students tended to be much less involved. They were, in such situations, likely to turn their attention to more interesting and pressing matters--what their neighbors were doing or saying-- or to disengage their attention altogether. The Chinese students on the other hand, responded quite differently to teacher differences. With teachers who were rated high on quality of teaching and quality of language use, the Chinese students were like the Hispanic. They were enthusiastically involved in the lessons, and appeared to profit from their participation. They were not as enthusiastic when they were with teachers who were not so highly rated, but at the same time, they were no less involved in activities that were difficult to follow because they were poorly conceived or conducted. What we observed in viewing the Chinese students in confusing or poorly taught lessons was this: far from losing interest in such activities, the students seemed to be even more attentive than they were in ones that were easy to follow; they were inclined to lean forward in their seats and to turn their heads slightly, as if cocking their ears so they might hear better.

Their response to unclear teaching seemed to be this: if they could not understand what the teacher was saying, it was their failure rather than the teacher's. And so they listened more carefully, and were more attentive even to what their teachers were doing and saying in poorly taught lessons than in well taught ones and in so doing, the Chinese students apparently compensated for teacher differences. By listening all the more closely, they picked up a lot of English, even in lessons that were, objectively speaking, boring, confusing or pointless.

#### 5.4.3 Summary of Findings on Production and Comprehension Gains

In summary then, it has been found that,

1. Different aspects of instructional practices and classroom experiences influence the development of comprehension vs. production skills;
2. The instructional practices that were found to influence language development have differential effects on learners depending on their initial level of proficiency in English;
3. The instructional practices and patterns of language use that generally influence language development work differently for children, depending on cultural background;
4. The role played by the teacher depends on the concentration of LEP students in the class and school, and on the availability of English speakers to interact with.

More specifically, we have shown the following relationship between our independent variables and oral language development:

1. Variables that influence the development of PRODUCTION

skills in English:

A. INTERACTIONAL OPPORTUNITIES were related to gains in production for everyone, but--

--There was a greater effect for Hispanic students than for Chinese students.

--There was a greater effect for students with low initial proficiency in English, generally. (The Chinese students were an exception--they got more out of interactional opportunities when they were at intermediate levels of proficiency.)

B. QUALITY OF LEARNING ENVIRONMENT

--Significant gains for Chinese students with low initial levels of English proficiency in classes that were high on this variable.

--There was an opposite effect for Hispanic students:

--There was a negative relationship between classes that were high on this variable and gains in oral language production.

C. QUALITY OF INSTRUCTIONAL LANGUAGE and QUALITY OF TEACHING were both related to gains in production skills for all, but--

--The greatest effects were related to gains for Hispanic students.

--There were relatively minor effects on Chinese students, even at the lowest levels of initial English proficiency.

2. Variables that influence the development of COMPREHENSION skills in English:

A. Percent time in teacher directed activities (formal lessons, teacher directed discussions, etc.) was related to gains in comprehension for everyone.

B. QUALITY OF LEARNING ENVIRONMENT

--Related to gains in comprehension for Hispanic students at all levels of English proficiency.

--Related to gains for Chinese students only when they reached an intermediate level of English proficiency.

C. QUALITY OF INSTRUCTIONAL LANGUAGE

--Related to gains for the Hispanic students, but not the Chinese.

D. INTERACTIONAL OPPORTUNITIES

--Related to gains for the Hispanic students, but not for the Chinese students, in fact, the Chinese did worse in classes that were high on these variables!

E. Factors that were related to gains in comprehension skills for the Chinese students:

- \* Verbal practice in teacher-directed lessons
- \* Practice giving extended responses in lesson
- \* Opportunities for oral participation in instructional activities
- \* Individual help given by teachers to student

Some major conclusions that can be drawn from these findings are:

1. All learners profit from opportunities to interact with peers who speak the target language, but the Hispanic students profit especially. The more opportunities they have to use English with peers, the more they gain in production and comprehension.
2. Chinese learners profit from interactional opportunities with peers only after they have reached intermediate levels of English proficiency.
3. Chinese learners profit more from structured, relatively noise-free learning environments. This factor is related to gains in production and comprehension for them. It is related to gains in comprehension, but not in production for Hispanic learners.

4. Quality teacher directed instruction is important for all, but especially for the Hispanic students.
5. Hispanic students are relatively more sensitive to the quality of teaching and to the quality of the instructional language they are exposed to than are Chinese students. Chinese learners are more "immune" to differences in teachers, because they tend to "compensate" for less successful teachers.
6. Chinese students profit most from close interaction with their teachers, and from assisted practice with the language in lessons. They depend more on adults for input than they do from peers. They need a lot of guided practice especially during the earliest stages of learning English.

#### 5.5 Comparisons of Classes by Overall Gains in Proficiency

In Table 5.8, the classes are shown ranked by gains in production and comprehension scores, and by their beginning and ending scores in the two measures of proficiency as well.

Table 5.8

Third Grade Classes Ranked by Gains in English Proficiency  
and by Beginning and End Test Scores  
in Production and Comprehension

| Class         | Rank in Production |       |     | Rank in Comprehension |       |     |
|---------------|--------------------|-------|-----|-----------------------|-------|-----|
|               | Gain               | Begin | End | Gain                  | Begin | End |
| -----         |                    |       |     |                       |       |     |
| Gr 3 Chinese  |                    |       |     |                       |       |     |
| 3C1           | 4                  | 9     | 6   | 11                    | 3     | 7   |
| 3C2           | 10                 | 10    | 10  | 1                     | 12    | 3   |
| 3C3           | 2                  | 13    | 13  | 9                     | 11    | 12  |
| 3C4           | 6                  | 5     | 4   | 13                    | 2     | 8   |
| 3C5           | 8                  | 2     | 3   | 4                     | 10    | 5   |
| 3C6           | 11                 | 1     | 1   | 10                    | 1     | 2   |
|               |                    |       |     |                       |       |     |
| Gr 3 Hispanic |                    |       |     |                       |       |     |
| 3S1           | 3                  | 7     | 2   | 8                     | 4     | 6   |
| 3S2           | 13                 | 11    | 11  | 5                     | 5     | 4   |
| 3S3           | 1                  | 12    | 12  | 3                     | 13    | 13  |
| 3S4           | 5                  | 8     | 5   | 6                     | 6     | 9   |

|               |   |   |   |   |   |    |
|---------------|---|---|---|---|---|----|
| 3S5           | 9 | 3 | 7 | 2 | 9 | 1  |
| 3S6           | 7 | 4 | 8 | 7 | 8 | 10 |
| -----         |   |   |   |   |   |    |
| Gr 5 Chinese  |   |   |   |   |   |    |
| 5C1           | 3 | 3 | 4 | 1 | 4 | 3  |
| 5C2           | 2 | 2 | 1 | 4 | 1 | 1  |
| Gr 5 Hispanic |   |   |   |   |   |    |
| 5S1           | 1 | 4 | 3 | 2 | 3 | 4  |
| 5S2           | 4 | 1 | 2 | 3 | 2 | 2  |

An examination of the relative rankings shown for the classes on this table will reveal that 1) the classes that began the highest gained the least, while the ones that began the lowest gained the most in production and comprehension, indicating a definite tendency toward the means; 2) in a few cases, however, the differences between pre and post-test scores were so great or little that the ranking of the class changed radically with respect to the other classes in the sample. Thus, being the among the highest in production and comprehension gains (first and third place, respectively) did nothing at all to alter the overall standing of 3S3. This Hispanic bilingual class was in twelfth place in production, and thirteenth place in comprehension, at the beginning of the year, and it remained at those positions at the end of the year, despite the gains that were made. A similar situation can be seen for 3C3 (the Chinese bilingual class that began in thirteenth place in production): it was so low that in spite of making the second highest gains in that measure, it stayed right at the bottom of the rankings. In the case of the class that began the highest in both measures of proficiency (3C6), being eleventh in production gains, and tenth in comprehension gains did little to alter its position at the top. It stayed in first place in production, and

was in second place in comprehension at the end of the year.

In some cases, however, the gains over the year changed the relative standings of the classes in major ways. Consider class 3C2, for example, a Chinese bilingual class which made the greatest gains of all the classes in comprehension. The students in that class made such great gains in English comprehension during the year that the class as a whole went from twelfth place at the beginning of the year to third place by the end. The same class did not make any gain in production, however. It was among the lowest (tenth place) in beginning production scores, it was tenth in gains over the year, and it remained among the lowest (tenth place) at the end of the year. The gains made in production over the year resulted in three classes moving up several places relative to the others: 3C1 moved from ninth to sixth place, 3S1 from seventh to second, while 3S4 moved from eighth to fifth place. And since the changes we are discussing here are in relative rankings, where there are gainers, there must be losers as well. Three classes went down several notches in production: 3S4 went from third to seventh, 3S6 from sixth to ninth, and 3S7 from fourth to eighth. And in comprehension, in addition to 3C2 which went from twelfth to third place, 3C5 went from tenth to fifth, and 3S5 going from ninth to first place. On the down side, 3C1 went from third to seventh, 3C4 from second to eighth place, 3S4 from sixth to ninth place, 3S6 from seventh to eleventh place. Among the fifth grade classes, 5C1 and 5S2 each went down one place in production, while 5S2 and 5S1 went up one. In comprehension, 5C2 and 5S2 stayed in first and second place, respectively 5C1 went up one place, while



5S1 went down one.

Let us consider the classes in terms of changes in their relative rankings between pretest proficiency scores and posttest scores. Looking at the classes grouped by whether they gained, stayed in place, or went down in relative ranking from the beginning of the year to the end of the year we can see some of the effects of program structure and instructional practices on language development. The thirteen classes fall into four distinct groupings: the classes in the first of these either maintained or gained in their beginning ranking in production, and went down in comprehension; the reverse was true for the classes in the second group, these went down in production, and gained or stayed in place in comprehension; the classes in the third group went down, both in production and in comprehension; and the ones in the last group either gained or stayed in place in both measures of English proficiency. The first two of these patterns are especially interesting since they remind us that the two major aspects of language proficiency do not necessarily develop in tandem. More importantly, they offer us a way of seeing how different situational factors and instructional approaches and practices can affect language development. We have found in relating our findings on language learning outcomes to our classroom observations that the teachers in the classes that made the greatest progress in language development generally provided their students with more direct instruction than did the teachers whose classes made less progress during the year. Amount of time, however, was only one aspect of it. A key finding in this study, as we will point out shortly, is that

different aspects of instructional practices and of the classroom setting are related to gains in oral language production than to gains in comprehension.

#### 5.5.1 Gain in Production, Loss in Comprehension

Table 5.8 shows that four classes (3C1, 3C4, 3S1 and 3S4) gained or maintained their beginning rankings in production, but dropped (relative to the other classes in the third grade sample) in their comprehension rankings. All four were bilingual classes; two of them were Chinese, and the other two were Hispanic. To the casual observer, these classes would not have seemed to be much alike in their organization or in their functioning. The two Hispanic classes, for example, were quite dissimilar in organization. 3S1 was highly structured, and the students spent an average of 51% of classtime in teacher directed activities. 3S4, on the other hand was quite loosely structured; the children spent as much of 77% of their time working on their own, and only 20% in teacher directed activities. In both cases, such activities consisted largely of the teacher going over assignments with the students before or after they worked on them on their own. The two Chinese classes were somewhat more similar in their organization, but they too differed in many respects. One of them (3C1) was a team taught "flip-flop" class. The students spent alternate days with one teacher who was quite rigidly structured, and with another who was considerably less structured. There was relatively little teacher directed instruction in either class, and on the average, the students spent about 23% of their combined time in group or

whole class lessons, and the rest of their time doing seatwork assignments. When they were with the structured teacher, the children were required to work by themselves and to keep to themselves. When they were with the less structured teacher, they were encouraged to work together, and in fact to tutor one another on assignments. The other Chinese class (3C4) was also one in which the students spent relatively little time in teacher directed activities (31%) and a lot of time doing individual seatwork. This teacher was also highly structured, but she tended not to discourage children from talking to one another while they worked at their assignments, or on individualized learning activities. When we looked more closely at these four classes, however, and analyzed the various types of instructional activities that took place in them during the year, interesting commonalities surfaced that have helped us understand the pattern of development that we found taking place in the English language proficiency of the children in those classes.

In each case, the students in these classes enjoyed extended periods of work during which they could freely interact with one another on their school work. This was true even for 3C1 and for 3S1, both of which had teachers that tended to be highly structured. In the case of 3C1, the teacher who was highly structured, and who prohibited the children from interacting with one another during work periods was balanced by the other teacher of this team-taught class. While the students were with this other teacher, they had a great many opportunities to interact with classmates on schoolwork. In the case of 3S1, when the children were not engaged in teacher directed

instructional activities, they were permitted to consult one another about their work. The teacher in this class frequently assigned students to tutor individuals in the class who needed special help, and thus, there was a lot of peer interaction built into the instructional activities. It would appear from these observations that opportunities to interact with peers during work periods in the classroom are indeed related to development of oral language production skills for our LEP subjects.

A second common characteristic was seen across these four classes. Except for 3S1, there was considerably more time spent in seatwork activities than in teacher directed instruction. There were other classes in which there was as much or even more time spent in self-directed or seatwork activities as in these classes, but what characterized these four was that the teacher directed lessons observed in them tended to be relatively weak in organization, and in their linguistic focus. Only one of these teachers (3S1) provided a substantial amount of teacher directed instruction each day. In most cases where as much of the time was spent in teacher directed instruction, the classes tended to show marked gains in comprehension scores. In the case of this class, however, we find an exception to this general pattern: it went down in comprehension generally.

The teacher directed lessons in these classes consisted largely of the teachers going over seatwork assignments that the students were to complete on their own, or while working together. There were seldom any explications of the concepts being taught, or extended discussion of the materials covered. Looked at from the LEP child's

perspective, the lessons in all four classrooms would not have been seen as "good input".

In their lessons, the teachers of these classes tended not to do demonstrations or to use materials that would have enabled to students to see what they were talking about. Two of the four teacher invariably translated everything that they said in their lessons. By doing that, they made certain that they successfully communicated the information being covered in the lesson to all of the students, whether or not they understood English easily. The consequence was that the LEP students in these classes tended not to listen to the English spoken by the teacher during lessons, and thus, not to develop their comprehension skills. These teachers apparently did not adjust the English they used in these lessons in ways that would have allowed the students to make sense of it (and hence to use it as linguistic input) since the translations they were providing eliminated the communicative need to make further adjustments.

All four teachers were found to be quite low in the use of the language techniques and instructional practices described in Chapter 3 as aspects of the "good language input" variable or of the "good language teaching" variable. This is not to say, of course, that these teachers were not "good" or successful in their teaching generally. Several of them got excellent results in their programs, if the CTBS scores for these classes can be seen as evidence in this regard. Their lessons did not work well for the development of language comprehension skills, however. (In the next major section, the reader will see that how teachers use language in presenting information to

students during formal lessons, how they structure those lessons, and the extent to which they give students opportunities to participate in teacher directed instructional activities do affect the LEP students' development of the new language.)

#### 5.5.2 Loss in Production, Gain in Comprehension

A second pattern that can be seen in Table 5.8 is one in which the gain and loss of position is opposite to that just discussed. Two classes (3C5 and 3S5) gained or maintained their position vis a vis the others in the third grade sample in comprehension scores, but lost ground in their production scores. Both were all-English classes; one served Hispanic students, the other Chinese. They were very much alike in several important and highly revealing ways. Both were highly structured classes in which the teachers did a great deal of teacher-directed instruction. 51% of the school day was spent in such activities in each of the two classes. The amount of time each day was spent in seatwork activities was quite comparable for the two classes: 44% for 3C5, and 48% for 3S5. During seatwork, the students in both classes were generally discouraged from interacting with one another. They were given opportunities to participate verbally during teacher directed instructional activities, although the verbal participation that was invited tended to be relatively constrained in form (short, specific responses rather than open-ended, free responses).

The formal lessons conducted by these two teachers, however, were nearly ideal from the perspective of the LEP students in the class. The instructional language used in them was tailored to the

proficiency levels of the participants, with the teachers making adjustments in usage based on feedback provided by the students. They repeated, paraphrased, demonstrated, and explained. They were constantly monitoring, it seemed to us, student responses to the information they were presenting. When it appeared that the children understood, they went on; when they appeared not to understand, the teachers tended to make more adjustments. Despite such adjustments, however, the language used in these two classes was far from simple. Both teachers presented the content of their lessons in language that was structurally quite complex. The students in these two classes appeared to understand what the teachers were presenting in lessons most of the time, it seemed to us. This was in large part because both teachers demonstrated the concepts they were presenting, and the students could see what they were talking about even when they didn't always understand the language being used. In their presentations, however, both teachers focused the children's attention on the language being used, so that when they were able to figure out what their teachers were saying, they also seemed to make sense of the language as well.

### 5.5.3 Loss in Production, Loss in Comprehension

A third pattern can be seen in looking at the relative positions of 3S6 and 3S7 on comprehension and production score differences. These two classes, both of them all-English classes serving Hispanic students, lost ground relative to the other classes in comprehension and production scores. (They also lost ground relative to the other



classes in CTBS scores as shown in Chapter 3). Both classes made use heavy use of individualized work assignments (60% of the time for 3S6; 87% for 3S7). There was little teacher directed whole class or group instruction for one of these classes (7% for 3S7), but more for the other (30% for 3S6). The formal lessons in both of these classes were far from ideal for language learners, however. The teachers seldom made adjustments for the sake of the language learners. Neither of them seemed to recognize the special language needs of the LEP students in their classes, even when they were instructing them in groups by themselves. The typical approach for these teachers was speak to the LEP students just as they would to the native English speakers in their class. The adjustments they made appeared to be in content only, and not in the language they used, as we discovered when we analyzed transcripts of their lessons carefully. Thus, in working with the LEP students, these teachers generally focused on the development of low level mechanical skills (e.g. accuracy in decoding, memorization of phonics rules, etc.) rather than on the development of higher order skills such as those involved in understanding the materials they were covering. The LEP students appeared to have considerable difficulty dealing with these lessons. They often had trouble understanding what their teachers were saying and responding appropriately to their questions. They got little, it seemed to us, from the instructional activities provided them by their teachers.

Much of their time, however, was spent in individualized seat-work. What is of interest here is that there was little of the peer interaction that is usually permitted in classes that are structured



in this way. The rule in both classes was that the students not talk to one another during periods when they were doing seatwork. Even when some measure of interaction was allowed in these classes, however, the Hispanic students tended not to interact with their English speaking peers. Both of these classes were in a suburban school in which the Hispanic children were clearly the minority group. The Hispanic and the Anglo students generally avoided contact with one another, although they were not in any way unfriendly about it. In class, the children were grouped for instruction by "ability level"; in the case of the Hispanic students, grouping was by language ability rather than ability level and thus they were frequently segregated from the other students for instruction as well as for group work. Much of the day for these students was spent either working on individualized materials by themselves, or in segregated group instruction. They got little practice in using English with their peers, nor did they get much exposure to language that they could use as input for developing their comprehension skills.

#### 5.5.4 Gain in Production, Gain in Comprehension

The final pattern is one in which the classes either gained both in comprehension and production, or they maintained their starting position relative to the other classes. There were five classes in this group. The situations for the classes which maintained their original rankings were various. Two of these classes (3S3 and 3C3) were the lowest ranked classes initially in both comprehension and production. Both of them gained one dimension (3C3 in comprehension,

and 3S3 in production), but not in the other. The gains, however, were not sufficiently great to make much of a difference in their relative positions among the classes, and could be attributed as much to a regression to the mean phenomenon as to the instructional characteristics of the classroom programs. The patterns observed in these classes, however, were consistent with the ones discussed above. In the case of 3C3 which gained considerably in comprehension, the teacher's formal lessons were much like those described for other classes which showed gains in this dimension of English proficiency. In 3S3, there was a great deal of student interaction permitted, a situation which appears to be conducive to the development of production skills. Both of these classes remained among the lowest in both areas of English language proficiency at the end of the study period, since they were begun so low.

The reverse situation can be seen with 3C6, which was also in this group of classes that gained in both dimensions of proficiency or maintained their standings relative to the other classes. It had the highest initial proficiency language scores, and kept that position at the end despite having made only small gains in proficiency scores in both areas. The students in these classes got little teacher directed instruction, and they had little opportunity to interact with one another during class, but they were advanced enough in their English language development that this situation did not hurt them much. These students did not lose any grounds, but neither did they make much progress in their language development during the study year. Although they were more advanced in their English proficiency as a

group than the twelve other third grade classes in the study, they were by no means fully proficient either. The students who were the lowest in English proficiency in that class made little gains during the year, as we learned when we looked at patterns of individual gains and losses. What distinguished this class was that it was entirely structured around individualized instruction. The students spent 93% of each school day working on individual assignments. The teacher provided consultation and help to students on an individual basis, but other than making assignments, and offering help as needed, the teacher interacted relatively little with the students.

#### 5.6 The Effects of Instructional Structure and Patterns of Language Use on Oral Language Development[1]

In this section, we discuss in somewhat greater detail the instructional practices and patterns of instructional language use which were found to be associated with language development in our subjects. The discussion in this section focuses on the classroom observations that led us to examine the instructional variables we have in this study.

##### 5.6.1 Characteristics of Classrooms as Settings for Language Learning

Two sets of characteristics appear to distinguish classes that work for language learning from those that do not. The first set

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[1]The following sections by L. W. Fillmore appear as a chapter in a volume edited by S. Gass and C. Madden entitled Input in Second Language Acquisition. Rowley, MA: Newbury House, 1985.

relates to the way the classes are structured or are organized for instruction, the second to the way language is used in lessons. An explanation of how class structure could possibly figure in language learning might help to put the two types of features into perspective. In organizing classes for instruction, educators seldom consider the effects that different types of structure might have on language learning. The main purpose of structure in the classroom is to facilitate the teaching of subject matter. Classrooms are complex social environment. Typically, there are some 25 to 30 students representing varying degrees of interest in being there, and willingness in being instructed (Jackson, 1968). That many bodies and separate personalities in one room can add up to a chaotic and unpredictable social situation without some sort of structure. Teachers have a curriculum to teach over the course of a year. In order to cover the curriculum in that time, they have to exercise control over the social behavior of the participants in the class. Aspects of this control involve the scheduling of events and the organization of lessons; they also involve the imposition of rules governing movement, behavior and social interaction among classmates, and between teachers and students during classtime. Verbal behavior is ordinarily tightly controlled during instructional events: teachers regulate the topics of discussion and its pacing and direction; they decide who gets to talk, and for how long; and finally, they judge what the students have to say and how they say it, and correct them when it is deemed necessary (Edwards and Furlong, 1978). How classes are organized, and how instructional events are structured determine to a large extent the nature of the language that students hear and use in the classroom.

There are many ways of organizing and structuring classes, but jargon-istically speaking, they can be subsumed under two labels: "teacher directed" (or "teacher centered") and "open" (or "student centered") classes. The first type is on the high end of teacher control, the second is on the low end with teachers coordinating rather than directing the social and learning behavior of the students. In the first type of structure, many instructional events are organized as whole class or large group activities which are directed by the teacher. In the second type, there are fewer teacher directed activities than individual and group learning activities in which students work cooperatively without much teacher involvement. These two types of structures can add up to quite different language learning opportunities for LEP students. Let us consider how classes that worked well for language learning differed from those that worked less well, first in the way they were structured, and secondly in the way teachers used the target language during instructional activities.

#### 5.6.1.1 How Participant Structure in Lessons Affects Language Learning

There were, in all of the classes studied, some teacher directed, whole class (or large group activities), some small group activities which were either teacher centered or student centered (i.e., groups of students working on cooperatively on projects), and some seatwork type activities in which the students were given work assignments to carry out individually. The classes differed considerably, however, in how much each type of activities was used. In a fourth of the

classes much of the instruction was carried out as individual seatwork activities. A few classes were at the other extreme, and with instruction organized mostly as teacher directed whole class or large group activities. The others were more balanced, making use of both types of activities.

A common belief held by language learning specialists is that the best situation for language learning is one that is relatively "open" in structure, and in which students can talk freely with one another even during instructional activities. We assume that in such settings students can get maximum contact with classmates who speak the new language, and through this contact get the practice they need in using it. But this seemed not to be the case for the classes that have been studied here. By and large, the most successful classes for language learning were the ones that made the greatest use of teacher directed activities. In such classes, individual work was assigned mostly as follow-up activities to formal lessons during which teachers led students through the materials that were being taught, and directed them in discussions of that material. Indeed, classes that were open in their structure, and those that made heavy use of individual work were among found to be among the least successful for language learning.

In the case of open classrooms where students are given a degree of choice in how they deal with the materials they have to learn, and a certain amount of freedom to interact with one another during instructional activities, it seems that how much practice students get with the use of English depends on individual circumstances and on who is in the class. Students who want to interact with English speaking

classmates and teachers, and who have the social skills needed to conduct these interactions in a language that is new to them do quite well in open classes. Those who find it difficult to socialize with others, or who feel constrained by the language differences that bar easy communication with classmates and teachers do not learn as much English. But such classes do not work well for anyone at all, however, unless there are sufficient numbers of English speaking students in the classroom to support the language learning efforts of the LEP students who are there. In open classrooms with high concentrations of LEP students, there are often not enough English speakers available to provide the input needed by everyone.. As noted earlier, the teacher is sometimes the only person in the class who knows English well enough to be of any help to the learners. But since much of the interaction between teacher and students in such classes takes place on an individual basis, the amount of exposure that students get to the new language varies enormously, depending on whether they take advantage of opportunities to interact with the teacher. How well they learn English may well depend on their ability to make the most of limited input. A major problem in such classes is that students do not get enough practice using the language with native speakers. They are free to interact with classmates while they are working, but if no one knows English very well, such interactions do little to further their development of that language. Where the students share a common L1, their interactions are most naturally conducted in the language they know rather than in English which is new to all of them. If they speak different L1's, they will try to communicate in English to whatever extent they can, but since no one knows it very well, the



forms they use are likely to be imperfect ones. The practice they get in trying to communicate with one another in a language they are just learning may result in some of the temporary forms that learners rely on becoming permanent features of their version of the new language. This is a problem in any classroom where learners greatly outnumber fluent speakers of the target language, no matter how the class is organized. Selinker, Swain and Dumas (1975) have shown that even in immersion classes that were structured in ways that apparently worked well for second language learning, learners developed many permanent interlanguage features through their exposure to the "junky input data" they were providing for one another in their interactions. It is not surprising, then, when we learn from Swain (1985) that after 7 years in school, the students in the French immersion programs have yet to acquire a fully standard form of their second language. The problem is especially acute in open classrooms since students generally spend more time interacting with classmates than they do with teachers; under such circumstances, the major source of second language input comes from other language learners, a situation which is hardly conducive to successful language learning.

Classes that make heavy use of individual assignments do not work well for language learning for a somewhat different reason. Like the situation in the open classrooms, students in such classes neither get enough linguistic input to serve their needs nor do they get adequate practice in speaking the language but not necessarily because there are too few English speakers in the class or because they are not inclined to interact with them. The problem instead is that classes



that are organized in this manner do not allow for much talk of any type, and thus there are few opportunities to hear and speak the language at all. Teachers spend a certain amount of time each day going over new materials and explaining assignments to students, but for much of the school day, students work independently on the materials that have been assigned to them. Classes that are organized in this manner vary somewhat, but students are often discouraged from talking to one another while they work. Students can consult teachers regarding their assignments, and teachers often extra spend time working with individuals who need help, but much of the time is spent with students engaged in work that is done without interaction. Hence students get little exposure to the language at all except for the short periods during which the teacher explains new materials and assignments, or when there is a need to go to the teacher for individual help with work. The exposure they get to the new language in these ways is all often insufficient to serve as the basis for learning it. In this case, the learners may be in contact with people who speak the target language, but they are given few opportunities to interact directly with them. In order to learn a new language, learners have to be in a position to engage in interactions with speakers in a variety of social situations, since this is what allows them to figure out what is being said, how the language is structured, and how it is used socially and communicatively by its speakers. In this type of classroom, there is contact with speakers, but too little actual interaction with them to serve the needs of the language learners. Some individuals, namely those who can make the most of whatever input they get, may acquire the new language nevertheless. Otherwise, it is

up to the learners to seek help outside of the classroom. Those who are inclined to seek out English speaking classmates, and who can manage to engage them socially during breaks in the school day will learn some English; those who are not so inclined, or who lack the social skills to manage such contacts will learn little.

How were the classes that were successful settings for language learning different? As noted above, the prevailing structural pattern in these classrooms was a balance between teacher directed activities and individual work activities. But not only were there generally more such activities than in the less successful classes, the events themselves differed in organization from those found in less successful classes. The organization of instructional events is important since it affects both the delivery and the usability of the language as input, it appears. Since this language constitutes "free input" for the learners, an opportunity to engage in the use of the language without having to seek it out and without the need to play a role in keep it going, it is an important source of input for all of the learners; it is especially so for those who, because of individual circumstances, find it difficult to interact with English speakers on their own. What were the structural characteristics of instructional events or lessons that worked well for language learning? They were, in general, aspects of the structure of events that appear to affect how well the language used in them works as input. Let us consider the characteristics of these lessons in reference to examples drawn from observational records of some of the classrooms that were studied. Excerpts that are referred to here in the text are drawn from

lesson transcripts that are included in the appendices to this report [see Appendix C]. It should be noted that the transcripts that are referred to here include both negative and positive instances of the various structural and linguistic features of lessons that work for language learning; they should not all be regarded as samples of exemplary lessons. Examples from the transcripts will be referenced by number, and by line number.

#### 5.6.1.2 Structural Characteristics of Lessons That Work for Language Learning

Formal lessons with clear boundaries. First of all, the lessons that appear to work well for language learning were formal, scheduled lessons with clear boundaries. The beginnings of small group lessons were usually marked by a actual change in the physical location of the students, or by some other movement to indicate the formation of the subset of the class involved in the lesson. This sometimes meant moving to the area of the classroom designated as the meeting place for the group, or turning seats around so students face one another. The beginnings of such events were often marked by changes in the teacher's voice quality or volume, or in the teacher's location or posture, these serving to call the group to attention. The teacher in Lesson Excerpt #1 [Appendix C] for example, marks the beginning of the math lesson she is teaching in all of these ways: The students had moved to the front of the classroom where the group that is scheduled for a formal lesson with the teacher usually meets; the teacher had just taken her place in front of the chalkboard where she usually

stands at the beginning of the math lesson each day; she straightens her back, and lifts her head, as she looks out over the group. She pauses for a moment, neither moving nor speaking--a signal to the group that the lesson is about to begin. The students stop their chattering, and she begins. She begins speaking in what is her "public voice", this in contrast to the quieter and softer tone she ordinarily uses when speaking to individual students, or when she is talking to the class informally. She had earlier made use of a formulaic starter to get the event going: "Tigers and Bears, take your places." Her use of these math group names had signaled the beginning of the math period to the class, and without further instruction, the students had moved to the parts of the room where they were scheduled to meet. The groups alternate every other day between formal math lessons with the teacher, and individual seatwork as assigned at the end of the previous day's formal lesson. The group doing seatwork meets in the back part of the classroom, and the group receiving the formal lesson sits at the front of the room facing the blackboard.

How do such apparently non-linguistic features of lessons figure in language learning? Features such as boundary markers for lessons frame the event, giving the students an idea of what to expect, both linguistically and instructionally. The events in these classes were clearly scheduled, so students knew what to expect throughout the school day. The formulaic starters used by the teachers helped to signal when these scheduled events were to begin, so the students knew when they should begin paying attention, and what they should be listening for. This kind of signalling is similar to that found in

studies of "motherese" (Snow and Ferguson, 1977), whereby caretakers interacting with babies make use of prosodic cues such as higher pitch, lip rounding, and special intonational patterns to call the learner's attention to language that is meant for them. An impressive consistency in the use of such features was found across lessons in the successful classes. The teachers in these classes tended to follow the same pattern day after day in the way they bracketed their lessons. There was no evidence in these classes of children who appeared not to know where to go, or what to expect at this level, no matter how little English they seemed to know. In the less successful classes, it was often unclear when one event ended, and another began. The students frequently appeared uncertain as to what was going on, or what they were to do next. In contrast to the successful classes in which little time was wasted getting activities organized, lessons took a great deal longer to get underway in the less successful classes,, and teachers had to spend a lot more time informing students as to what was expected of them. Thus, the first type of structural characteristic of successful lessons is consistency in organization: students knew what to expect and what to do procedurally, because the routine was well established.

Lesson scripts. The next structural characteristic has to do with the format of the lesson itself. In the successful classes, a remarkable consistency was found across the lessons conducted in a given subject area by each teacher. This consistency was in how the lessons were organized, in the activities that were undertaken during each phase of the lesson, and in the language that was used in its

conduct. That is, if one were to examine all of the math lessons taught over the period of a month by the teacher in Lesson Excerpt #1, one would find that she followed essentially the same format each day in what she did, and in how she presented the materials in each lesson. Further, she followed essentially the same approach in her math lessons for both math groups. While different materials were covered from group to group, and certainly from day to day for each group, one finds that the lessons in any given subject were framed in very much the same way for everyone. In reading lessons, for example, a teacher might follow a format like this: Present new vocabulary items used in the text at hand; elicit discussion on the meanings and uses of the new words and relate them to known words; have the group read the words together from the list; have the group read the text silently; have individuals take turns reading paragraphs in the text; discuss the meaning of the text with the students; and finally, make an assignment for seatwork to be done individually. A lesson format such as this is not very creative, and is not presented as an example of fine teaching; however, if a teacher follows even an unimaginative format such as this one day after day, it soon becomes a kind of scenario which is familiar to the students. Once they know what the routine is, they can follow it and play the roles expected of them as participants in the event.

Observations of lessons in the successful classes show that in any subject on a given day, essentially the same lesson format is followed for all groups. The same is true over the period of a month, say, although over the course of the school year, the format may

change somewhat as the class progresses through the curriculum. It is almost as if these successful teachers are following "lesson scripts" that they have adopted for each subject that they teach. This is certainly not unique to teachers teaching second language learners, nor is it a surprising practice. Depending on how one looks at it, such a practice might seem common-sensical, or it could be seen as unimaginative, routinized teaching behavior. For the language learners who have to learn from these lessons, however, consistency in presentation serves an important purpose. Once they learn the sequence of subactivities for each subject, they can follow the lesson without having to figure out afresh what is happening each day. They know what they are supposed to do, and what they should be getting out of each phase of the lesson, thus they are ahead of the game in figuring out what they are supposed to be learning each day.

The language used by teachers in each phase of these lessons also tends to be routinized, consistent, and therefore, familiar. Because of the high degree of regularity in the lesson routines, the students we observed in the successful classes appeared to understand what the objects of the lessons were, and they seemed able to follow what was being presented most of the time. They had to deal with new content each day, but the format in which it was presented was a familiar one. Thus, they had a high degree of expectation to aid them in dealing with the new materials being presented. The familiar routines apparently provide a kind of scaffold for the interpretation and learning of the new materials. The children in the successful classes seldom needed help in getting oriented to the content being covered in



lessons, and from all appearances they were able to keep up with their teachers in most of these instructional activities whether or not they understood everything that was said. This structural regularity and consistency in presentation added up to a predictability that plays a major role in comprehension, I believe. From day to day, only the specific content being taught was new. Since the activities were familiar, they provided a context within which the language and the subject matter could be understood, all of which adds up to greater comprehensibility for the materials.

Another important aspect of the formatting found in these lessons relates to the use of instructions and signals to guide the learners through the activity. An example of this can be seen in Lesson Excerpt #1. On line 1, we see that the teacher telling the students what to do immediately, what they are to expect, and she locates this experience in the context of a prior experience so the students, so the students know what they will be doing.

Open your workbooks...  
Now we're going to review this page...  
You did have math on Friday, but you didn't use this book.  
Now we are talking about fractional parts...  
Now look at our problems.

Such formatting statements mark not only the boundaries of the lesson, they also signal movement through the phases of the activities. Notice how pragmatic particles such as "OK" are used to mark movement in the lesson we have been looking at:

OK, boys and girls, when we...(line 2)  
OK, let's do another...(line 8)



In line 20, the teacher marks the recapitulation phase of her lesson with this:

Everyone remember that? Remember when we did the work on Thursday? OK? It's really easy because your top number is one. So all you have to do is go ahead and divide your second number, the one they want to know the fractional part of, by the denominator of your fraction [she points at the relevant parts of the statements on the board as she says this]. It gets a little more complicated when we are doing it where it had another number on the top half of the fraction, like two-thirds, or two-sixths, but these are easy because you only have to go ahead, and do like a division problem, OK?

Such statements help to orient the students during the lesson: they tell them where they are in the lesson, and where they are going next. In a sense, these are directions that help student to put what they are learning into a coherent mental framework. Throughout these successful lessons, one finds contextualizing remarks of this sort, which are meant to locate current experiences with respect to prior and future ones so the students have some way of interpreting the new materials being presented to them. By putting the present lesson in the context of an earlier one, the teacher anchors the new language in things that she has reason to believe the students already know. If the students remember what they did or learned on the earlier occasion, the prior experience becomes a context for interpreting the new experience. In lessons like this, prior experiences serve as the contexts within which the language being used is to be understood.

Turn-allocation in lessons. The final type structural characteristics of lessons in successful classes relates to the way in which turns were allocated to students for participation. This is especially important since it affects the amount and kind of practice stu-

dents get in the use of the new language, and the extent to which individuals actually participate in lessons. There were, for each type of lesson, and sometimes in each phase of the lesson, fairly well established ways in which students were to participate. Teachers might begin one phase of a lesson by inviting volunteers to read, or to supply instances of whatever is being discussed. They might then call on each student in turn, a more systematic procedure of turn-allocation than that of asking for volunteers since every person gets called on to take a turn. In the next phase, the whole group might be asked to recite in chorus, a procedure which allows everyone to participate, although not individually. Finally, they might call on individuals, ignoring bids for turns by the students themselves.

Here again, teachers in successful classes tended to use a variety of turn-allocation procedures, but they were consistent in following well established set of procedures within lessons for any given subject. The students in these classes generally understood what the procedures were, and they knew the rules, although they sometimes ignored them and had to be reminded of them, as we see in the lesson presented in Lesson Excerpt #4 Appendix C]. On lines 18 and 38, we see that students have to be reminded that they have to raise their hands to bid for turns. This excerpt is of the lesson phase during which the teacher calls on individuals of her choosing, but by her rules, students who have an urge to participate before she is ready to call on them can bid for a turn as well, provided they do it by the rules. Although these teachers made use of various turn-allocation procedures, they generally managed to call on everyone at least

several times during each lesson. In contrast, in less successful classes, procedures for participation were often unclear, and students engaged in a great deal of competitive bidding for the floor. The ones who were the most eager to be heard, and the most aggressive students got called on frequently; those who were less so got fewer turns to participate, and hence, less practice in using the new language and less of the feedback that is available through this kind of participation in lessons. Another problem observed in classes that did not promote successful language learning was reliance of turn-allocation procedures that were inappropriate with respect to the participant structure of the lesson. Systematic turn-allocation, for example, wherein every individual is called on in turn works well when the group is small, since each individual is likely to get called on more than once. When students know that they will be called on to perform, and are able to anticipate when it is going to happen, they prepare themselves and are attentive at least until they have had their turns. This works fairly well even when the group is as large as the one in Lesson Excerpt #1 (14 students); it would not work, however, in a lesson involving the entire class. In that case, each individual would have to wait for 29 others to be called on between turns. Not only would there be too few turns for each person (usually one per person), but the students tend also to lose interest in what is going on since they no longer have to be attentive once they have had their chance to perform. The worst kind of situation from the language learner's perspective, however, is one in which there are few turns to be had at all, as we see in Lesson Excerpt #2 [Appendix C]. In this lesson, the teacher races through the materials, neither stopping for discussion,

nor asking students whether they understand what is being presented.

## 5.6 2 How Language Use in Lessons Affects Language Learning

Let us consider what prior research suggests are some necessary conditions of language learning: we know from studies of both first and second language acquisition that learners need more than mere exposure to the language to be learned. Language learning is possible when learners are in frequent enough contact with speakers of the language to develop sets of shared experiences and meanings which help them communicate despite the lack of a common language. When speakers interact with learners on a continuing basis, and they have reason to communicate with them, they will find ways of conveying information to them. In the interest of communication, speakers are likely to make substantial modifications both in the form and content of what they say for the sake of the learners, and some of these adjustments actually help the learners by making it possible for them to figure out what is being talked about, more or less. Learners on their side will try to figure out how to respond and to participate in these interactions, based on the models of the language the speakers have provided for them over time.

Hatch (1983) in an analysis of discourse data drawn from studies of language learning has found that the adjustments made by speakers for the sake of learners whether of first or second languages are quite similar: they speak more slowly, enunciate more clearly, make greater use of concrete references than they do abstract ones, and use shorter and less complex sentences than they might otherwise. They

also make greater use of repetitions and rephrasings than usual, and they accompany their speech with gestures and demonstrations that give learners some extra-linguistic cues to aid in their understanding of what is being said. Others have determined that the level of adjustments in the forms and content of speech to learners are made interactively, with the learners themselves indicating to the speakers when adjustments are needed and when they are not (Cross, 1978; Long, 1981). By their attempts to communicate, learners and speakers are said to "negotiate" the form of the messages until they are "comprehensible" to the learner (Hatch, 1983). Krashen (1981a, 1981b) and Long (1981) have argued that "comprehensibility" is crucial in determining whether the language spoken to learners works as input. Language serves as input, according to this view, when it serves a genuine communicative function, and when the learner does not have to know the language in which the message is encoded to figure out what is being said; this is possible when the message can be understood from strictly from context. Swain (1985) contends that comprehensible input is necessary, but in no way a sufficient condition for language learning. She argues that in addition to

input that more or less makes sense to the learner, there must also be "comprehensible output" for it is in learners' attempts to construct messages that encode their own communicative intentions in speech that they are in a position to figure out how the language is structured.

#### 5.6.2.1 Characteristics of Teacher Talk that Works as Input

Let us consider the characteristics of the language used in lessons that apparently worked well for language learners, again with reference to examples of lessons taken from the observational records of the classes that were studied. First of all, it should be noted that the students in the classes involved in the Lesson Excerpts found in the appendices were all quite limited in their knowledge of English. Few of these children had had more than 2 or so years of English, and some had less than that at the time these lessons took place. At that point, they still needed a great deal of help in order to understand what was being talked about in school. It was a problem for their teachers then to teach anything to them that was complex, or which dealt with materials that could not easily be demonstrated. How teachers attempted to communicate what was to be taught in a lesson affected not only how well lessons worked instructionally, it also determined whether the language used in them worked for language learning, as we shall see when we consider the characteristics of language used in successful lessons.

Clear separation of languages. There are various approaches that teachers can take when they believe their students might not understand what they have to say in English. One possibility is simply to ignore the problem, speak normally, and hope for the best. Another is to switch to the student's L1, and teach them what they have to learn in language they know, a solution that is available to teachers who are bilingual. In neither case, however, are the LEP students aided in their efforts to learn the new language. In the first case, the language being used simply does not work for input; in the second, the

language being used is not the one that the students are trying to learn. Another solution that is available to bilingual teachers is to repeat what they have to say in English in the students' own language, thereby providing them with translations that they can understand. This was a practice that was observed in classes that were unsuccessful for language learning, but never in those that were successful.

In the bilingual classes that worked well for language learning, the two languages of instruction were kept quite separate. This has long been regarded as a crucial element of the immersion approach, according to researchers who have studied its development (Lambert, 1984; Cohen and Swain, 1976). In these programs the two languages are kept separate in at least two ways: they are used at different times, and by different teachers. Like the immersion teachers, the ones in the successful classes in this study did not mix languages, but presented what they were teaching directly in the target language. This was not easy, since many of the students in these classes were quite limited in their command of English.

Teachers with students representing a wide range of levels of proficiency in English were especially inclined to resort to language alternation in their teaching. When students range from full proficiency in English and to no English at all, teachers find it especially difficult to use language in ways that are suitable for everyone. If they speak in ways that are appropriate for the students who know English, the non-English speakers will be unable to make sense of what they are saying. If they address themselves to the special needs of the LEP students, they do not serve the needs of the English



speakers. In these situations, teachers find language alternation (whereby they say everything in both languages) an easy expedient. By switching back and forth between English and the LEP students' language, teachers ensure that everyone understands the materials that are being taught. The problem, however, is that this practice has a decidedly negative effect on language learning.

Language learning occurs when students try to figure out what their teachers and classmates are saying, when teachers through their efforts to communicate with learners provide them with enough extra-linguistic cues to allow them to figure out what is being said, and when the situation is one that allows learners to make astute guesses at the meaning of the language being used in the lesson. Translations appear to short circuit this process from two directions, it appears. When translations are used, teachers tend not to make the kinds of modifications in English that they might otherwise make. Modifications are made, as noted earlier, in an effort to give learners access to the meanings of messages that speakers want to communicate to them. But since access to meaning is provided in translation, speakers do not regard it as necessary to make any modifications in the English they are using as well. If we assume that these modifications enable learners to figure out what is being said, then the English that is being used in this way is not usable to them as input. But aside from the fact that the English which is translated fails as input because it is not properly adjusted, it also fails because the learners tend to ignore it. When learners can count on getting the information that is being communicated to them in language they already know, they



do not find it necessary to pay attention when the language they do not understand is being used. Observations in classrooms where this method has been used have shown that children tend to tune out when the language they do not know is being spoken (Legaretta, 1979; Wong Fillmore, 1982).

An example of this type of language usage in teaching can be seen in Lesson Excerpt #2 [Appendix C]. This lesson is interesting since the teacher in it is teaching English words through Spanish. The object of the lesson was to teach the students

the meanings of these English words so they could use them in sentences that they were to write after the teacher's presentation of the lesson. In many respects, the language found in this excerpt is not greatly different from that found in the other transcripts. The difference is that the students in this class apparently got little out of the experience because they paid attention only to the Spanish. But even if they were listening to the English, it is doubtful that they could have made much sense of it. Consider, for example, lines 3 and 4 of the Lesson Excerpt:

[Pointing at the first word on the board:]  
Number one is "weak". Not the day of the "week".  
It's when a person is weak. And that means  
you don't have too much strength. Like when you  
get sick, and when you catch the flu.  
After you get over the flu, you still feel kinda week.  
Right? You're not very strong.  
Weak.  
Esto quiere decir "debil". Cuando uno esta debil, no  
esta fuerte. Por ejemplo, cuando tengamos la gripe,  
verdad? No tenemos fuerzas. Estamos debil.  
Es lo que quiere decir esta palabra.  
[="This means weak. When someone is weak, he's not  
strong, right? We don't have much strength; we're weak.  
That's what this word means.]

In order for language like this to work as input the learners would have had to hold the English they heard in mind until they heard the Spanish; they might then be able to match up pieces of the English text they had heard with the Spanish. They could not have otherwise figured out what the teacher was saying in English since she did nothing that allowed them to figure out what her words meant. In observing the students during this lesson, it was apparent that few of them understood how the words the teacher was teaching them were to be used. They could, of course, understand her Spanish, but since the words they were supposed to be learning and putting into sentences were in English, they were quite confused. The extent of their confusion was clear from the number of times students had to go to the teacher, and to the observer for help with this assignment.

An example of a similar lesson drawn from one of the successful classes can be seen in Lesson Excerpt #3 [Appendix C]. The teacher in this lesson used only English, although she might have alternated between languages as well. It should be noted that the students in this class were no more proficient in English than were those in the previous lesson. The teacher in this class, however, manages to communicate the meaning of the new words she is teaching to the students by connecting them to words they already know, and by getting them to put the new words into their own frame of reference. Consider, for example, lines first three lines in the transcript:

T: [Teacher points at the first word on her chart:]  
Your neighborhood. Who can tell me what that  
word means? Patricia?

C1: Like the place where you live?

T: Um-hum. It's the area where your house is. Your neighborhood, boys and girls, is that area, right closeby, where your house is.

C2: Where it is all the block?

T: Uhm-hum. It usually means like within a block or so.

A real problem for teachers in situations such as this is to communicate abstract concepts to them, ideas that cannot easily be demonstrated, but which can be learned only by connecting up words with understandings that can come from real-life experiences. The children involved in the above lesson knew enough English to put things together, but it would be a real problem for teachers to teach labels for concepts such as "neighborhood" at earlier stages of language learning.

Emphasis on communication and comprehension. One solution for teachers is to recognize that one can, by using whatever works, e.g., pictures, demonstration, gestures, enactment, to communicate some of the information to the students, but not everything. Teachers sometimes regard it as essential to teach LEP students everything that is contained in the curriculum at a level that is appropriate for English speaking students, even when it is clear that they do not have the language skills to deal with instruction at that level. In such situations, the students get little, either of the content or of the language being used in such lessons. The problem is that when students do not understand the language of instruction, something has to

give: adjustments must be made both in the content and in the language being used. The immersion programs have provided us with ample evidence that it is possible to develop academic and second language skills simultaneously, but adjustments have to be made, especially in the early stages of school. This is a major way in which language learning in the classroom differs from language learning in other settings. There is a specific content that has to be covered in each lesson, and it has to be communicated well enough for the students to learn it. This is not an easy matter when the students are just learning the language through which the information is being conveyed. But it is possible, as we have learned by observing lessons taught in successful classes.

There was in the lessons we observed in these classes, an emphasis on communicating directly in English as much of what was to be learned by the students as possible. By making careful modifications in the content itself, by adjusting the language used in the ways that have been described as characteristic of the language used with language learners, by carefully tailoring the language used according to feedback provided by the learners themselves as to whether or not they comprehend what is being said, the teachers in the successful classes made it possible for students to get something out of each lesson, even at the earliest stages of language learning. A point to be made here is that in the lessons we observed, the language being used was in the service of communicating subject matter to students. It was therefore quite different from the language that gets used in, say, typical ESL lessons where the language is used

strictly for practice. Aspects of this can be seen both in the way the information was conveyed in the successful lessons, and how language was used in them. Let us consider the math lesson in Excerpt #1 again. Notice that the ideas and concepts being discussed and taught in this lesson are quite complex: fractional parts, equations, division, denominators, etc. In each case, the meanings of these concepts are conveyed by demonstration. The teacher writes on the board as she speaks, thus relating the words she uses with numbers arranged as problem statements with which the students have some familiarity:

OK, now boys and girls when we talk about  
one-half  
of a number [she writes " $1/2$ "],  
like one-half of 6 [she writes " $\times 6$ " to the right of " $1/2$ "],  
that is the same [she writes " $=$ " to the right of the " $6$ "]  
as dividing 6 [she writes " $6/$ " after the " $=$ "]  
by--, Luis?

When Luis supplies the answer "2" (he could hardly get it wrong since it is clear from her presentation what she is after), she completes the problem statement for all to see, and she repeats the phrase:

Same as dividing 6 by 2! [She writes the problem on the board again: 6 over 2. Pointing at the 2, she says:]  
You use your  
denominator  
--that is the bottom number, and you  
divide  
this number [points at the 6] by the bottom  
number of the fraction. What is 6 divided by 2?

One sees in this transcript how the teacher demonstrates each idea that she is trying to communicate to the students. In this way she gets the information across to the students, even though the language

itself was difficult.

What is surprising about this lesson is that it is pitched at a level that is appropriate to the grade level of the class, despite the fact that most of the students in it were quite limited in their English proficiency. They seemed to have no trouble following what she was saying, however, and were apparently able to figure out what they were to do with the problems. By writing the problems as she spoke, she demonstrated how the concepts she was discussing related to the procedures that the students were to learn and put into use. The students could see what they were to do even when they were unable to understand all of what she was saying. By putting the new information she was presenting in the context of work that the students had already completed, she made it possible for them to make use of prior knowledge and experience as contexts for making sense of the new materials. Altogether, the presentation of information in a variety of ways in this lesson added up to a message redundancy that gave the students multiple access to the materials that were taught in it. The students could hardly have missed the point of it.

Grammaticality and appropriateness of the language used in lessons. An important feature of the lessons that were observed in the successful classes was that ungrammatical or reduced "foreigner-talk" forms were never used in them. The language used by teachers in all of the lesson transcripts which are included in the appendices was entirely grammatical and appropriate, including the one taken from a not so successful class. The teachers in the successful classes tended to use language which was not only grammatical, but was

registrally appropriate to the activity as well. The register that is used in these lessons is instructional language. Its purpose is to convey information and to teach skills, and thus it tends to be more precise, more expository, and more highly propositional than ordinary talk. Since this is exactly the type of language skills that the students need for school, it is essential for them to be exposed to this level of language by their teachers. At the same time, however, it is clear in examining these transcripts that the language that is being used is not as complex as might be used for this grade level (all of the lesson excerpts are from third grade classes).

Repeated use of patterns and routines. Transcripts of lessons in successful classes show that teachers frequently adopt patterns or routines for their lessons that have the appearance of pattern-substitution drills; the big difference being that the ones found here are used in the teaching of subject matter rather than for practice. This is especially apparent in the math lesson found in Excerpt #1. Notice that essentially the same sentence frame is used by the teacher throughout the lesson as she demonstrates the procedure for setting up the problems, and for solving fractional equations:

One half of 6, that's the same as dividing 6 by--  
...Same as dividing 6 by 2.  
One third of 12. It's the same thing as dividing  
12 by what number?  
...It's the same as dividing 12 by 3.

Similarly we find in Lesson Excerpt #4 [Appendix C] the same routine used repeatedly as the teacher in this lesson elicits from the students definitions of words such as "inventor", "sailor", "tailor", and

the like:

What does an inventor do?  
They make things. New things.  
An inventor made up the first TV.  
An inventor made the telephone, the first telephone.  
An inventor made the @U[first] electric light.  
An inventor invents things.  
He makes up new things for the first time.

By such means, teachers create situations that not only allow students to interpret the information to be conveyed to them, they also call attention to the way in which sentences pattern in the new language. By this the teachers help the learners to detect the structural regularities in the language used, a first major step in learning a new language. In this way, teachers were able to help students become familiar with some fairly complex structures as we see in line 51 of the same Excerpt:

Lots of people collect coins. All different kinds of moneys and coins from all over the world. People who collect coins are called coin collectors.

Since the teacher has been building up a familiarity with these structures throughout the lesson, the students have a frame of reference for dealing with them; thus these sentences can be interpreted by the students, and their structures noticed perhaps, if not learned immediately.

Repetitiveness. An important feature of the language used in these lessons was a fairly high use of repetition. Clear examples of this can be seen in the spelling lesson found in Excerpt #4. Not only is this teacher presenting the students with neat paradigm sets of



sentence patterns in the lesson, she is also giving them multiple opportunities to hear virtually the same sentences, although with minor modifications. See, for example, lines 34-36:

T: What does a major do?

C: A mayor is the person who own the city?

T: He doesn't own the city.  
The mayor doesn't own the city.

We see this again on lines 39 to 43, where the teacher provides the students with a timely feminist message in addition to several chances to hear the essentially the same sentence:

T: Who is our mayor? (No response.)

T: Ooh! You forgot yesterday! Who is our mayor?

Cs: Mayor Feinstein!

T: Yes! Mayor Feinstein. Is our mayor a man or a woman?

Cs: Woman!

T: Yes, so a woman can be a mayor.  
A woman can be a governor.  
A woman can be a president!

What we find in these successful lessons, then, is that repetitions are not necessarily identical, but there are small changes in them which may in fact serve to call the learner's attention to places within such expressions where forms can be substituted. In this way, learners can figure out some of the substitution rules in the language, and they get some clues as to alternative ways of saying the

same thing. Paraphrases are also frequently used in such lessons. Teachers seldom say anything in just one way; they say it in several different ways giving students more than one chance to figure out what has been said. Nice examples of this can be seen in the "inventor" text (Excerpt #4, line 33):

An inventor invents things. He makes up new things for the first time.

and in the math lesson (Excerpt #1, line 14):

One-sixth of 36 equals, is the same thing as 36 divided by what number, Carlos? Same as 36 divided by---

Tailoring of student participation. The manner in which teachers involve students in lessons has been mentioned in connection with the discussion on turn-allocation procedures used in lessons. Let us consider the linguistic characteristics of this aspect of lessons. One way in which turns in successful lessons differ from those in less successful ones is in the kinds of questions that are asked of students. We assume that the questions that give language learners the best practice in speaking are those that invite them to say a lot. Thus, questions which elicit one word answers (e.g., "Is this a compound word?" or "Who is our mayor") are not as good as open-ended ones (e.g., "What are your views on X?" or "What do you suppose is going to happen if Y".) which call for longer and more complex responses. Constructing such responses, however, calls for a perhaps a higher level of control over the structures, forms and usages of the language than learners may have, especially at the early stages of learning the language. They would find it difficult to respond, even if they

understood such questions, and had something to say in answer to them.

In lessons taken from less successful classes, one finds several types of unproductive practices in this regard. One of these involves teachers asking questions only of those students who are fairly proficient in the language. The students who are just learning English seldom get called on, and thus, they are given little opportunity to practice using the new language in class. Unless they bid for turns to participate in the discussion, their involvement in lessons is mostly passive. Another practice is for teachers to ask only low level questions requiring simple one-word answers. In such situations, no one gets much practice in speaking the new language except for the teacher. The students learn how to supply one-word answers to questions, but they get little else. A third practice has been discussed in relation to the translation lesson in Excerpt #2, in which no questions are asked that require answering. This teacher asks for agreement as in line 3, "After you get over the flu, you still kinda weak. Right?", or she might use a pseudo-question as a way of moving the topic along as in line 7, "Number three is 'silk'. Know what that is? It's material." Neither of these are questions that call for answers, and indeed, the teacher gave no indication that she wanted any response.

In more successful classes, we find a quite different practice. In the lessons observed in them, it appears that teachers do a great deal of tailoring of questions to fit the levels of proficiency of individual students. Those who know the language fairly well get asked open-ended type questions or ones that call for responses

containing complex structures, for example, "Your neighborhood. Who can tell me what that means? Patricia?" (Excerpt #3, line 1). Those who are just learning the language are asked questions that require short, one word responses. Similarly, one finds in lessons where the materials that are being taught are complex, teachers tend not to ask questions that require complicated answers. In Lesson Excerpt #1, for example, in which difficult procedures and concepts were being taught, the teacher used only questions that required one word answers: "What is 6 divided by 2?" "It's the same thing as dividing 6 by (what)?" In this way teachers focus the students' attention on what they are saying rather than on how they should say it. At the same time, however, we see that teachers in these successful classes nearly always repeat the one-word or short responses supplied by the students, and expand them into full sentences by way of confirming their responses. These expansions give the students a chance to hear what their short response represents in their full forms as we see in this example drawn from Excerpt #3 (lines 7-9):

T: The people who live in your neighborhood ar called  
your what?

Cs: Your neighbors!

T: Yes, the people who live in your neighborhood are your  
neighbors.

By tailoring the ways students are to participate in lessons according to their ability to use the language and according to the kind of materials being covered in such lessons, teachers lessen the anxiety that language learners are likely to feel when more is

expected of them than they can give, or when they have to deal with more than they can easily handle at one time. It is not easy for students to deal with learning a language and learning new materials through that language at the same time, but teachers apparently can make adjustments in their instructional practices that ease the task somewhat.

Richness of language. The final characteristic of the language used in successful lessons is that of richness and occasional playfulness as well. One might assume that in talking to learners, teachers ought to avoid anything unusual, and stick with plain ordinary, unembellished language until the students have gained a degree of mastery over the fundamentals of the new language. In the lessons that we have observed, teachers do try to keep the language simple, but it is in no way the stripped down, unnaturally plain language featured in many ESL courses. The teachers in successful classes tended to use language in ways that called attention to the language itself. Some especially nice examples of this can be seen in Lesson Excerpt #5. The teacher in this lesson was one who took advantage of every available opportunity to impart a feel of the language to his students. We see him offering his students a vocabulary item that is a cut above the ordinary in lines 7 through 14:

T: Do you see--have you ever been to a place where there is a bridge?

Cs: Yeah, yes!

C: And you know--and down--uhm--uh, uh, 14th Street?  
[Child gestures as he speaks, arching one of his arms high, passing the other arm under it.]

T: Uh, down on East 14th Street? There's a bridge down there?

C: No, uhm, uhm, uh--[He repeats the gesture.]

T: Down by the water?

C: Uhm-hmm.

T: They call that the "es-tu-ary", the estuary. That's where the water comes in--from the bay.

Examples of playfulness can also be found in these lessons, especially when the teacher is someone who enjoys verbal play as in Excerpt #5:

T: Do you know another animal that looks like a goose?

C: A duck!

T: A duck. But this one here has a looooong neck! It begins with--sw--[forms initial sounds of the word he is after] --sw--!

C: I know! I know! Uh, uh, a swan!

T: A swaaaaan! Yes, a swan. Did you ever hear that poem? Swan swam over the sea. Swim, swan, swim! Swan swam back again. Well swam, swan! Did you ever hear that? That's a good poem. An un-twistable tongue-twister poem.

There were, throughout these lessons, an emphasis on helping students to develop a greater control of the forms, functions and uses of the new language. The teachers did it in more ways than by what they taught, however; they also exemplified it in their own use of the language. Teachers vary in their ability to use language creatively, of course, but that strictly speaking, is not what is required. In

these successful classes we find teachers who were not necessarily creative in their use of the language, but they were uniformly able to communicate clearly and effectively. They were effective communicators because all of them were concerned with communication.

These are just some of the characteristics that appear to differentiate lessons that work for language learning from those that do not. It should be noted that the variables influencing language development are complex, and as we have found in this study, they interact in intricate ways with one another and with student characteristics to produce patterns of achievement that would be impossible to explain except by examining them in detail, as we have here. The messages that come from this investigation of the effects of instructional practices on language learning are quite clear: teachers play a major role in helping LEP students develop academic language skills. How they structure their instructional programs can greatly affect the kind and amount of exposure students get to the target language, and it can also affect the amount and usefulness of the practice they get with the language as well.

## CHAPTER 6

### THE NES SUBSTUDY

#### 6.1. Introduction

In this chapter, we report on the findings of a substudy which examines a problem faced by teachers in nearly all schools that serve limited English speaking students: the constant influx of new NES students who enter school throughout the year at every grade level. Many of these students are poorly prepared to cope with the instructional programs at their new schools, not only because they do not speak the language of instruction, but also because their past academic experiences have been in educational systems that differ substantially from the one they are entering. Some have had little prior schooling of any kind; those especially who come as refugees (from Central America and South East Asia, for example) have had badly disrupted educational experiences. These children present an enormous problem in educational planning for the schools. In most cases the schools they enter are already crowded: there is no space to house new classes, even when they are needed. How do schools accommodate new students when classes cannot be added? As we shall see, the practice in most schools has been to shoe-horn the newcomers into established classes at the appropriate grade level (which usually means placement in classes with students of about the same age). This presents a



major problem for the classroom teacher: how are the newcomers who lack the language and prior educational experiences of the rest of the class to be incorporated into an ongoing instructional program?

There were in 15 of the 17 classes that participated in the larger study, relative newcomers, NES and very LES students who had far less exposure to English than the other members of the class. The presence of these students added greatly to the complexity of the instructional situations observed in those classrooms; as a consequence, we raised several questions that are addressed in this sub-study: How were incoming NES students accommodated in the programs we were studying? How did the teachers in the study deal with the special language and instructional needs of new NES students in their third and fifth grade classes? What kind of programming and instructional practices appear to be effective, and which ones appear to be ineffective?

#### 6.2. The Problem Discussed

The classes involved in the larger study were at the third and fifth grades. The subjects in this study were students in 17 third and fifth grade classes who had begun school as non-English speakers two to three years prior to the study year. In our third grade classes, they were the children who had entered school with no English during kindergarten or first grade; in the fifth grade classes, they were ones who had entered school as non-English speakers during the second or third grade. Thus, the subjects had had two to three years

of exposure to English in school prior to the year during which we studied their language development. In nearly all of our study classrooms (including the ones at the fifth grade) there were other students who were like our subjects in most respects, but they could not serve as subjects since they had had less than 2 years of exposure to English. These students were recent immigrants: Some had just arrived that fall, others had entered school the year before. In fact, new students showed up in some of the classes through the school year, with the latest appearing just as the school year was ending. The newcomers added considerably to the heterogeneity in English proficiency and in educational level that the teachers in our study had to deal with in teaching their classes.

There would have been diversity in language proficiency even if everyone in our 17 classes had begun school at the same time and had had more or less the same exposure to English in school, since children vary in how quickly and well they make use of opportunities to learn a second language, just as they vary in the alacrity with which they learn to read or to compute. The newcomers greatly increased the range the teachers had to deal with in their teaching. These students needed the same kind of linguistic help that their LEP classmates had received in the earlier grades in order to learn English; at the same time they needed help in learning the basic skills required for dealing with instruction at the grade levels in which they had been placed. The question for the teachers was how to provide the help needed by the NES students in their classes, especially when the other students (including those who were our subjects) had such different

needs. Had most of the students in these classes been newcomers, the solution would have been relatively straightforward: the teachers could have focused on providing what these students needed, making use of essentially the same techniques that teachers of NES students use at the lower grades.

In general, however, the NES students were found in relatively small numbers in each class, although in three of them, the combined NES students (ones who were new that year) and very LES students (ones who had entered the year before) comprised more than a third of the class.

The reader is referred to Table 2.9 and 2.10 in Chapter 2 of this report which give the percentages of NES students (those who had had less than a year of exposure to English) in the 17 classrooms. Figures are given for both those students who were in the class for the entire study year ("stable" students) and those who were in the class, but not for the entire year ("transient" students). As shown in Table 2.9, there were greater numbers of NES and very LES students in the Chinese classes (20.5% of the "stable" students in the 8 Chinese classes) than in the Hispanic (7.7% of the students in the 9 Hispanic classes). This reflected the large numbers of South East Asian immigrants and refugees who were moving into the cities in which the Chinese schools were located. A comparison of the figures on the distribution of NES students by grade and program on Table 2.9 shows that the largest percentage were found in the Chinese third grade classes (22.7%), and that more of them were placed in the bilingual third grades (27.8%) than in all-English classes (12.7%) This last is

true for the Spanish bilingual classes as well: at the third grade, NES students made up 10.4% of the bilingual classes, and only 4.1% of the all-English classes. At the fifth grade, NES students constituted 11.5% of the Spanish bilingual class, but a much smaller percentage of the all-English class (3.2%). There was only a slightly larger percentage of NES students in the Chinese bilingual fifth grade class than in the all-English class.

The policy in several of the schools was to place non-English speaking students into bilingual classes at the appropriate level if space for them could be found or created. This last was sometimes accomplished by moving students around; those who knew enough English to get by were moved from bilingual classes to all-English ones to create space in the bilingual classes for newcomers. This practice resulted in the large concentration of NES students noted in several of the classrooms. The more common practice, however, was to distribute the newcomers as evenly as possible throughout the school so that the classes would be more or less equal in size. In most cases this meant that each class in a school had to take in two or three new NES students each year.

So how did the presence of these children affect the instructional programs and practices we observed in the classrooms? Let us consider the problem from the perspective of the teachers of those classes.

As noted above, the subjects in the larger study were the students in the 17 classrooms who had had from 2 to 3 years of exposure

to English. The reason for studying second language learning at this relatively advanced stage has already been discussed in Chapter 1: we were concerned in the larger study with the development of the language proficiencies required for academic learning, namely those required for participation in instructional events in the classroom, and for the development and exercise of literacy skills. It takes time to develop the level of linguistic competence involved in understanding and interpreting the extended oral discourse used by teachers in lessons, or the written narrative and expository prose used by textbook writers. Proficiency of this kind is acquired in school, even for children who are native-speakers of the school language. It has its foundation in the structural and semantic knowledge that children acquire early on in the process of learning their language, but its development may take years of exposure to, and practice with, the "context reduced" discourse that is used in academic settings and materials. Second language learners such as those we have been studying have to acquire enough of the basic structural and semantic foundations of the new language before they can make any sense of the language used in school. After two or three years of exposure to English in school, some of them had that foundation, others were still in the process of acquiring it as assessments of their language proficiency have shown (Chapter 4). Despite the variation that existed among the subjects in how far they had gotten in the learning of English, by the beginning of the study year, most of them knew it well enough to be able to follow what their teachers were saying much of the time. It was apparent that they did not understand everything perfectly, but they understood enough, apparently, to get by in class.

Teachers of LEP students who are at the level of the subjects in this study can usually count on them having a fair understanding of English, and of instruction given in that language. Where teachers in the lower grades have to make massive adjustments in their use of English when they teach NES students subject matter in that language, teachers at the third grade and beyond do not have to be as concerned about the manner in which they present materials to their LEP students, provided they have had some exposure to English from the first grade. Teachers still have to make some adjustments in the way they use English when teaching these students, but these adjustments are in no way as drastic as those made by teachers working with students who are just at the beginning stages of learning English. In such cases, teachers have to work at making the gist of what they are trying to communicate obvious, or at least inferable, from the instructional activity itself. They depend on gesture, demonstration, depiction and enactment to get across to the student the meaning of the lesson. They accompany these non-verbal communicative efforts with spoken language, but the utterances they produce in such situations are likely to be short and structurally simple, and the information being communicated may be simplified to the bare minimum, namely corresponding to those elements of the subject matter that can be communicated by non-verbal means. In bilingual programs, teachers can present the subject matter to NES students in their L1, and thus teach at a higher level than they could if they were teaching these students in a language they do not understand, but unless the students have some exposure to English used in the manner just described, they will not have much success in learning it as a second language.

The efforts that teachers (and other speakers of English) make in adjusting their speech when attempting to communicate directly with NES students in English plays a crucial role early in the process of learning a second language. They are still helpful, but not crucial, when working with students who have reached the level of English proficiency of the subjects in this study. What such students need, in order to develop the kind of proficiency that we are studying in this investigation is exposure to a more expanded use of the language as it is spoken by fluent, competent speakers of English. They need to become familiar with the ways in which native speakers use English to serve a variety of communicative functions, most especially those associated with academic discourse: describing, narrating, explaining, comparing, and so forth. Further, they need practice in using the forms and structures they have acquired to communicate their thoughts precisely and clearly to other speakers of the language. The instructional events that are conducted in the classroom offer the ideal vehicle by which teachers can provide their LEP students with this kind of language experience. Some of the teachers provided this kind of experience for their students, others did not (See Chapter 4).

The heterogeneity in English proficiency found among the LEP students in these classes was one of the reasons why there was relatively less of this kind of teaching in some of the classes. Teachers, of course, are accustomed to dealing with different ability levels among students, and handle such student differences by ability groupings. When language proficiency differences are added to ability differences, the usual groupings do not work as easily. What might be



appropriate for some of the students in a given group would not be so for the newcomers. They need special help with the language: their teachers have to teach them to understand, speak, read and write English at the same time they are teaching them the subject matter that has to be covered at that grade level. The problem for the teachers is to find time to provide this kind help for students who need it, and at the same time, to give the others the academic experiences they need as well. Additional help of this kind presumably would be beneficial to most limited English speaking students, but the problem is that learners find different kinds of experiences useful to them over the course of the acquisition process. The kind of experiences needed by NES students to get a start in the learning of English are different from those needed for developing fluency and precision in language use after two or three years of hearing and using it in school. How teachers handled this problem, and to what apparent effect, are examined in the sections that follow.

### 6.3. Methods

#### 6.3.1. Subjects

The subjects in this substudy were the NES students in 15 of our 17 classes who had had a year or less of schooling in English. Only those who were of the same linguistic background as the subjects drawn from each class were targeted for observation. Thus, there were, in some of the classes additional students who were much like the NES subjects, but who were not selected for observation because they had



more than a year of exposure to English (but not quite two years which would have qualified them to serve as subjects in the main study), or because they spoke a language other than Spanish (in the case of the Spanish classes) or Cantonese (in the case of the Chinese classes).

#### 6.3.2. Data Collection Procedures

The data on which this substudy is based are primarily observational. Two separate sets of observations were collected for this substudy: one was concerned with the ways in which teachers dealt with the special needs of the NES students in their classes, and the other with the manner in which these students dealt with the experiences that were available to them. There were two types of teacher observations:

- (1) Teaching Practices #1: The resident Research Assistant for each of the 15 classes with NES students was asked to observe and keep a record through the year of how the teachers worked with their NES and very LES students. The following questions guided this set of observations which the RA's conducted over the year:

How were the NES students incorporated into the class?

What subjects (e.g., reading, language arts, math) were they being taught?

Were they grouped separately for instruction with just other NES students, or were they taught in mixed groups?

What was the level of instruction being provided these students?

Who was responsible for teaching these students each subject (teacher, specialist, teacher's aide, etc.)?

To what extent did the various persons who worked with the NES students coordinate their activities?

In which language was the instruction given?

In what way were the NES students in the class accommodated in activities, if any, that involved the whole class?

Were the NES students provided any formal instruction in ESL? By whom? How frequently? Where did it take place? What was the nature of this instruction?

How did the teachers who worked with the NES students deal with their special linguistic needs in the context of teaching them each subject?

What kind of linguistic adjustments did the teachers (or aides) make when teaching the NES students?

Were the students given any extra instruction which was focused on teaching them aspects of English vocabulary or grammar?

To what extent were the NES students invited or encouraged to participate actively in classroom learning activities? Were they asked to participate verbally or non-verbally? Were they asked to contribute opinions or information, or to answer questions? How frequently were they invited to participate?

How frequently did the NES students voluntarily participate in classroom activities, either verbally or non-verbally? What type of activities did they tend to prefer?

When there was any change in the way these students are instructed, or in their patterns of participation, what was the nature of the change, and what prompted it? These observations were reported on a debriefing questionnaire which the RA's completed on each class (see Appendix A).

- (2) Teaching Practices #2: The observations described above were conducted by the same RA's assigned to the classrooms participating in the larger study. In most cases, each RA (most of whom worked half-time only) was assigned to just one classroom. The observations they made were invaluable, and reflected the intimate knowledge they had gotten from having spent as much as two

full days each week through the school year collecting data in their classrooms. But since each of them saw only one classroom, their observations were lacking in a comparative perspective. Thus, a second set of observations was made, this one by the Principal Investigator, who conducted full day visits in each classroom. Three kinds of records of these observations were kept: Written notes made in real time during the observation; an audio-recording of the instructional events that took place in the classroom during that day; a written summary of the instructional practices observed in the classroom, with the focus on how the NES and very LES students figured in them. Among the questions guiding this set of observations were these:

What instructional events occurred during the day, and who was involved?

How long did each event last, and how was it structured?

What language was used for each instructional event, and in what manner was it used? If both the students' L1 and English were used, what was the function of each? How much of each was each and to whom?

To what extent were the NES students involved in the instructional events observed during the day? What did they spend their day doing and with whom?

Was the instruction given to the NES students appropriate for them in level? Did they appear to be making sense of the instruction they were receiving? Who worked with them during each event that involved them?

How were meanings conveyed when the NES or low LES students appeared to have difficulty understanding what was being said?

If there was any adjustment made in the language used, what was the nature of those adjustments, and to what apparent effect?

How much help with language per se was given to the NES students during the day? What was the nature of that help, and how did

the students respond?

What opportunities were there for the NES students to interact with classmates in English? What kind of contact did they have with their teachers?}

There were two types of observations conducted on the NES students themselves:

- (1) NES Observations #1: Two separate detailed observations were made of each NES subject during classtime, each lasting for 15 minutes. One of these was made during a teacher directed activity involving the student, the other during an independent activity (i.e., not involving a teacher). These observations were audio-recorded, but notes of the event were also made in real time in which the observer noted the interactions that took place, coded the functions of the language spoken, and described those aspects of the event that could not be construed from the audio-recording. The language spoken during the event was picked up by a clip-on microphone attached to a taperecorder in a backpack which was worn by the subject. After each observation, the RA completed a fact sheet on the manner in which the NES student was fitted into activities that day, and of any special techniques that had been used by teachers in working with them.
- (2) NES Observations #2: These consisted of hour long video-taped observations of each NES student in the classrooms in which video-taping was permitted, or of an additional set of observations of the activities involving the NES students where video-taping was not. These observations were made to gain an overall

picture of the experiences of the NES students in each class: the kind of instruction they received; the quantity and quality of the linguistic assistance they received; the frequency with which they were called on to participate during classroom activities; the extent to which they interacted with their classmates; the amount of practice they get in hearing and using the new language, either in formal instructional events, or informally; and in general, the extent to which the NES students were integrated into the instructional programs in their classes.

#### 6.4. Findings

##### 6.4.1. Common Practices

Teachers dealt with the NES students in their classes in a number of different ways, as shown in Table 6.1.

The most common practice by far was to deal with the special needs of NES students by grouping them with low performing students

Table 6.1

How NES Students Were Accommodated in Classes

| Method                 | Never Use | Occas Use | Freq Use |
|------------------------|-----------|-----------|----------|
| Ability grouping       | 4 (27%)   | 4 (27%)   | 7 (47%)  |
| Grouped separately     | 11 (73%)  | 2 (13%)   | 2 (13%)  |
| Pull-out               | 5 (33%)   | 8 (53%)   | 2 (13%)  |
| Individual instruction | 2 (13%)   | 10 (66%)  | 3 (20%)  |
| Integrated             | 5 (33%)   | 8 (53%)   | 2 (13%)  |

for instruction. 11 of the 15 classes made use of this practice; in 7 of those classes, NES students were placed in low groups for instruction in nearly all subjects. This was especially true for reading instruction: in 9 of the 15 classes, the NES children were placed in the lowest English reading groups. At the third grade, these groups were generally reading first grade level materials; at the fifth grade, the lowest groups were using second or third grade materials. The emphasis at both grades was on teaching phonics and developing basic decoding skills. This might appear at first glance to be a good solution since the NES students needed to learn to read in English, and phonics and decoding are among the first order of things to be taught to them in most reading programs. Even those who were already literate in their native language had to learn a new system of symbol and meaning correspondences. In such groups, they would get help in transferring their first language reading skills to English. Those who were not literate in their first language had to be taught to read from scratch, as it were, so the emphasis on training them in the mechanics of reading was not at all inappropriate for them. However, the kind of help the NES students need for learning to read in English goes beyond just learning to decode, or to deal with a new writing system. They have to learn the language itself in which the reading materials are written before they can make any sense of what they are reading. The NES students needed an understanding of what the words and the sentences they were learning to decode represented in the real world, and they could not get that on their own. Their teachers provided some of the help needed by these students while teaching them to read, but it was seldom enough. Since the other students in the group

needed help in learning to read rather than help in learning the language per se, the teachers tended to concentrate on teaching the mechanics of reading, and gave help on language only occasionally.

A second approach was to group NES students separately or with other students who were low in English proficiency. This was done in only 4 classes, although in at least two other classes, there were large enough numbers of NES and very low LES students to warrant such groupings. In 2 of the 4 classes, NES students were instructed in nearly all subjects in these language proficiency groupings; in the other 2, they were grouped separately for English reading and language arts, but were incorporated into regular groups for instruction in other subjects. As might be expected, in classes with large numbers of second language learners, the distinction between "ability" groupings and "language" groupings was often not a clear one. Many of the students in the low groups were in them because of performance problems that stemmed from their not being fully proficient in English. The distinctions used here are based partly on the membership of the groups (e.g., if everyone in a group was an NES or very low LES student, it was a language grouping) and partly on how teachers defined such groups (e.g., if performance level was the main criterion for deciding the membership of a group, it was an ability grouping). In these classes, reading instruction for these students was at about the same level as in classes where NES students were placed in low reading groups, but the difference was that teachers could devote more time to helping students deal with their language problems than they might have had some of the students not needed such help. In two schools,



NES groupings were managed through interclass cooperation. The teachers of several classes pooled their NES students into a single group for instruction in reading and math. This allowed the teachers working with these groups to tailor the instructional program according to the special needs of the NES students. These students varied in their prior educational experiences, but as everyone was a newcomer, they could nevertheless be instructed at the same level for a time; even those who were relatively advanced in their studies needed to get caught up in the new curriculum. And since these groupings were relatively homogeneous with respect to English proficiency, the teachers could more easily provide the special help everyone needed in language.

NES students were "pulled-out" of their regular classes for special instruction in 10 of the 15 classes. In most cases (8), it was for a short period of ESL instruction each day given by a resource teacher in the school. It was much more than that in two cases. In two all-English classes, the NES students received all of their instruction from "bilingual specialists", paraprofessional teachers who had been hired to tutor students like them that were scattered in classrooms throughout the school. These NES students spent as much as 2/3 of the school day out of their "regular classes" in these tutoring sessions. The instruction they received was variously described as "bilingual" or "ESL" support, but it mostly involved individualized work in English reading and math. Students were assigned to tutoring groups by native language, rather than by grade level. Their tutors spoke the same language as they, and were therefore able to provide



explanations and assistance in the students' native language when needed. In other cases, NES students were assigned to tutors by grade level rather than by a common L1. The tutor sometimes spoke English only, or was a bilingual who knew one of the languages spoken by the NES students in addition to English. In such situations, the tutor could provide L1 assistance only to a few of the students. The other students got help only in English.

Schools in California are required by state law to provide "bilingual individualized learning programs", or "BILP's", to NES and LES students when they cannot offer them bilingual education. The instructional support of this sort that was available to the NES students in our study varied enormously in quality and quantity across sites, however. In most cases, the instruction consisted entirely of informal help on school work assignments provided by paraprofessional teachers. Whether or not the help that was given to NES students was bilingual depended on whether the these paraprofessional teachers spoke the students' L1. The usefulness of these sessions depended on the amount of time students spent in them, and what they did during the sessions. Some students spent as little as 25 minutes each day in tutoring groups. Some spent nearly the entire day with such tutors and spent little time at all in their regular classes. In one school, the NES students spent all but the last hour of each day in pull-out BILP classes. The NES students in three of the English-only classes in our sample were sent over to the bilingual classes in their schools for language assistance. This made sense when these students spoke the same L1 as the students in the bilingual classes; it did not when they

spoke a different L1. In one school, Indo-Chinese students (Laotians, Cambodians, Hmongs, and Burmese) were sent into the Spanish bilingual classes for "bilingual" support each day. They spent approximately an hour there daily, but received virtually no instruction of any kind there as far as we could determine (e.g., see the classroom observation entitled "Lesson on California Counties" below).

The help given to the NES students in special tutoring sessions was meant to supplement or support the instruction they were supposed to be getting in their regular classrooms, but it was, in fact, the only instruction many of them received. Back in their own classrooms, these students worked on their assignments, or they sat and killed time. Consider this comment from an RA who became so concerned over the lack of attention given to an the NES child in one of the all-English third grade classrooms that she actually began tutoring him herself:

From the little I've worked with him on a one-to one level, his reading and math skills seem pretty low. He's reading in a primer book (first grade) and doing math problems at the second grade level (mostly simple addition and subtraction problems without regrouping). Unfortunately, because Teacher doesn't speak any Spanish, he most often gets sent next door to the bilingual classroom for special help in math, reading, etc. When he is in Teacher's class, he for the most part, merely sits and does nothing (except for fiddling with objects and generally fooling around. The fact that he sits idle for so much of the day really bothers me, so sometimes I'll give him special help with writing a story or something. When I show an interest in what he's doing, he really sparks up and is eager to learn.

Another common practice for dealing with NES students was to give them individual assignments to work on; Table 6.1 shows that this was used in 13 of the 15 classrooms. It was the predominant practice in 3

of the 13. In these 3, NES students spent all of their time working by themselves on assignments given them by their teachers. They were never included in any group instruction, nor did they participate in whole class activities. Such individual assignments often involved a great deal of practice exercises in the mechanics of reading, writing and arithmetic which were meant to help the newcomers catch up with their classmates in basic skills. The teachers put together work assignments for the NES student, explained the information or procedures to be followed in completing the assignment, and then directed the student to work on the assignment. Some teachers spent a considerable amount of time working with NES students individually in this manner, and monitored their work closely. Others did not. In fact, in 3 classes, including one of those in which the NES students were given nothing but individual work assignments, the teachers spent very little time teaching these students individually, or in checking their work. Any help or monitoring given to these students came primarily from the TA's in these classes.

Several major problems were observed in when teachers relied on this practice. The NES students in those classes received far less exposure to English than in classes where NES students were involved in some group instruction as well. When working with NES students individually, the bilingual teachers and TA's tended to use the students' L1 rather than English. The English monolingual teachers used only English, of course, but in such classes, the practice was to assign a bilingual TA who spoke the students' L1 to work with them. The problem is that when speaking to an individual, it is unnatural

and inexpedient to use a language that the speaker knows the addressee does not understand when they share a common language as well. Bilingual teachers apparently find it easier to use English in teaching NES students in group situations. Even when teachers and TA's did use English in talking with NES students about their work, such interactions tended to be brief, and were too few in number, to take the place of the prolonged exposure to English that students could get in a half-hour group lesson, for example.

Another problem that was noted in situations where NES students were instructed primarily through individualized work assignments was that they generally received much less teacher attention and guidance than did students in classes where NES students were involved in some group and whole class instruction as well. Our full day class observations revealed the extent to which classes differed on this dimension. In classes in which NES students received much of their instruction in groups, they generally got as much teacher directed instruction as the other students in the class. In the three classes in which NES students spent much of their time doing individual assignments, there was a substantial difference between them and their fellow students in the amount of contact they had with their teachers. In one of those classes, for example, students received an average of 115 minutes each day in teacher directed instruction. The two NES students in the class received an average of 18 minutes of instruction. Much of their time was spent working on their assignments on their own. The teacher and TA occasionally checked to see that they were doing what they were supposed to be doing, but otherwise, the

only time contact they had with the teacher was when they completed a set of work, and needed to be briefed on what they were to do next.

To what extent were the NES students incorporated into classroom activities, if they were at all? This was done in varying degrees in 10 of the 15 classes, but in only 2 of them did it happen routinely. In general, NES students were included in whole class activities, but teachers varied as to whether they did anything to accommodate the special linguistic needs of these students. Some of the ways in which they could do this was by using the L1 more than usual, addressing asides to them, asking the TA or a student to translate for them, addressing questions to them, or calling on them to play an active role in the activity. Such efforts on the part of the teachers indicated that they regarded the NES students as participants in activities for the whole class. It was easier for the teachers in the bilingual classes to make language accommodations since they were generally able to use the NES students' L1, and indeed the two classes in which teachers almost always included these students in their activities were bilingual ones. However, several of the all English teachers were careful about making allowances for the NES students in their classes, and to incorporate them as much as possible into the life of the classroom. Among the classes in which the NES students were hardly ever included were both bilingual and all-English classes. In these classes, the NES children were never called on during whole class activities, nor were they told what was going on. In fact, they were sometimes completely ignored. Consider this observational record that was made of a whole class activity in a third grade Spanish bil-

ingual class:

Activity: Lesson on California Counties

Structure: Teacher Directed Lesson in English

Participants: Everyone in class, plus a group of 8 Indo-Chinese students from a 5th grade class (who regularly joined this class for social studies instruction). Students sit at their desks; the Indo-Chinese kids are seated together at a table at the back of the room.

Notes:

Teacher has a stack of booklets (a packet of dittoed maps stapled together into booklets). These are materials the kids have been working on as they have student names written on the covers. She reads off the names, and the kids go up and get theirs. Teacher has put up a large poster-like version of one of the maps on the blackboard at the front of the room. The counties of California are marked off on it; most of the spaces are unlabeled. A few have county names written in, so the lesson apparently involves identifying and learning the names and locations of the counties of California. The Indo-Chinese kids didn't get any booklets. The teacher has taken no notice of them yet. At least she has not yet said anything at all to them. They look at her expectantly; they look around at the other students, and they wait. It appears that Teacher doesn't have any booklets for them. She reads off the county names already written on the map so the kids can check to see that they've gotten the names spelled correctly: "Solano, Mendocino, Amador," etc. Then she begins identifying some new ones, "This one right over here is Lake County. Right next to Sonoma County. See?" She prints 'Lake'. "OK. This one here, see, above Lake is Colusa. Colusa County." She prints 'Colusa' on the map. "And right under it is Yolo. Get that?" She prints 'Yolo' on the map. The kids are supposed to copy the names she has written on the corresponding places on their own maps. They strain to see what she has written on the map on the board. They look up at her map, try to locate the spot on theirs, try to make out the letters she has written. The Vietnamese kids sit and watch. I go over to check the pile of left over map books to find theirs. There aren't any for them. I ask the teacher if she has any booklets for the kids at the back table. She hunts around a little and finds some extras and gives them to me to hand out to the kids. I do. I try to get them started by indicating to them that they should copy down the names she has written. They can't see the words the teacher has written on the map (they are in pretty small letters), but they are eager to do something so they stand on their toes or lean over the table in an effort to get a better view. The teacher goes on with the lesson: "This one is called Napa County. See it? Napa

County." She writes 'Napa'. One of the kids at the back table squints as he copies down the word the teacher has just written on the map.

It would be hard to say why the teacher failed to include this group of NES students in the activity. They were in the class just to participate in the social studies lesson that she was giving. It might have been an oversight, or perhaps she had expected the TA, who was out that day, to work with them on some other assignment. Or she might simply have assumed that these students would not be able to understand the lesson she was giving in English, and as she was unable to offer them any help in their L1, she saw no point in asking them to participate. They might have gotten something out of the lesson, which apparently was a continuation of one that the teacher had started some time earlier, had they been issued booklets when the teacher first started this unit. She must have explained the purpose of the exercise at that time to the class so they would know what they were supposed to be learning from it; had these NES students been participants from the first, they might have understood what was going on. But from the activity observed that day, they could not have gotten much from it since there was no way in which they could have figured out what the words that were to be copied onto the dittoed drawing represented. They might have recognized the drawing itself as a representation of the State of California, and they would then have been able to figure out that the words they were to copy were place names. However, it was highly doubtful that they could have gotten from the activity itself any meaningful understanding of the notion of "county" as a governmental unit, nor could they have gained any sense



of the locations of the places being identified on the map relative to places in California they already knew.

#### 6.4.2. ESL Instruction

ESL instruction of one form or another was provided for the NES students in all but 2 of the classes in the study. As noted earlier, students were "pulled out" of their regular classes for such instruction in 8; the time spent in formal ESL classes of this sort varied between a half hour to an hour per day, 3 to 5 times each week. The most common pattern was for students to receive about 45 minutes of daily ESL instruction 4 times a week. Some of them received some additional ESL instruction if their teachers were providing the other students in the class with "oral English" or ESL instruction. This was available in just three classes, and consisted of anywhere from 15 minutes to 30 minutes of instruction on "oral English" in which students were drilled on English vocabulary or sentence patterns. In several classes, the NES students were provided with "ESL tutoring" by the TA in the class, who helped them with their assignments or showed them what to do with the educational materials and equipment that were available in the classroom. There were, in a number of classrooms, "Language Master" machines, "listening-posts", filmstrip viewers and other audio-visual gizmos and related educational materials available for the LEP students. The NES students in some of these classrooms spent much of their time in front of, or attached to such machines--listening to, and repeating vocabulary items that they might or might not have found very useful. Materials of this type were supplementary



in some classes, they were the only language instruction provided to NES students in others. In only two cases did the students received no formal English instruction of any sort. There was no ESL in one of the schools, and too little at the other. One teacher actively resisted sending her NES students to the ESL classes. At most, they could have gotten just two 45 minute ESL lessons per week due to the heavy demand for such support services at the school. The teacher argued that it was not enough to make a difference, and that it was hardly worth pulling the NES students away from their regular activities for so little support. She did not, however, provide any ESL for them in class so they got no formal instruction in English at all.

The content of the ESL instruction that was provided for the students varied enormously in quality. The "ESL specialists" in all but one of the schools we were in had had some training in ESL; however, in most cases, it consisted of one or two courses and some inservice teacher training workshops in ESL. In only one school did the specialist have a full program (Master's degree) in ESL. As mentioned earlier, the ESL instruction provided for students during these pull-out classes in some cases amounted to nothing more than tutoring on schoolwork assignments or help on English phonics and other mechanical aspects of English reading. Otherwise, ESL consisted largely of oral language drills aimed at giving students familiarity with basic sentence patterns and common vocabulary. It seldom consisted of instructional activities in which the target language was serving the very communicative functions for which it was being learned. In other words, English in these lessons was treated and taught as content; its

function as a medium of instruction was not regarded as being crucial to the language learning that the students were engaged in. In most cases, the formal ESL instruction was based on commercial materials--kits and courses that made use of picture cards, workbooks, and other pencil and paper exercise materials. It is hard to say just how effective these were since everything depended on what the teachers did as they presented them. In the hands of talented ESL teachers, these materials seemed lively and interesting at times. In the hands of less talented ones, they were stupifyingly bad. The children, to their credit, were generally so keen on learning English that they tended on the whole to endure even the driest of such experiences with forbearance and interest even. In none of the schools involved in the study did we observe ESL instruction that followed the "communicative approach" that ESL experts advocate.

#### 6.4.3. Instructional Roles

The teachers were instructionally responsible for the NES students as they were for the other students in their classes, but they did not always work directly with them. The NES students were taught exclusively by the teacher aide or by supplementary teachers in 4 classes. Two of these were situations in which the NES students spent much of their time in "bilingual support" pull-out classes which were taught by paraprofessional teachers. The NES students spent a portion of the first hour each day, and the last hour a day in their regular classes. They were not included in the instructional activities that took place while they were in the classroom, and they generally

worked on materials they had been given in their bilingual support classes, or did nothing at all. In most cases, however, the NES students were included in some activities that were taught by the teachers. In only 5 classes, however, did the teachers themselves take major responsibility for working with their NES students. In these classes, the teachers either grouped the NES students separately and gave them specially tailored instruction that was geared to their language needs, or they incorporated them into low functioning groups. In most cases, the NES students were included in a few teacher-taught lessons each day, but received most of their instruction from teacher aides and outside specialists. The extent to which NES students were included in formal instructional activities and lessons that were taught by their teachers appeared to be an important variable in their educational development and language learning. As we have seen, formal lessons taught in English proved to be one of the key variables in LEP students' language learning outcomes in the larger study. For these NES students, formal lessons constituted their major exposure to English. The teacher aides and bilingual support teachers who worked with them were usually able to talk to them in their L1, as were the teachers in the bilingual classes. These teachers and aides communicated with the NES students almost exclusively in the L1 especially when they dealt with them individually, as in tutoring sessions. The English monolingual teachers could communicate with the NES students in English only, but in such situations, they generally assigned their aides to work with these students, and sometimes had little contact with them. We found that only in 5 of the 15 classes with NES students was there enough high quality exposure to English needed to

support second language learning. In the others, there was either too little exposure to English (because the aides and the other instructional personnel who worked with them tended to use the students' L1 nearly exclusively), or because the English they were being exposed to was virtually unusable as "input". In such classes, the teachers seldom made the kinds of adjustments in their use of English that would have helped the NES students to make sense of the materials. When the NES students were included in group lessons, the teachers either ignored their special linguistic needs, or they translated everything for them. Two of the teachers translated whenever the NES students were included in instructional activities. As we have found (see Chapter 4), language alternations of this sort render the language virtually useless as "input" from both ends. When the teacher is making it possible for the NES students to understand what is being said by translating everything into the L1 for them, so they don't feel it is necessary to adjust their English at all. The NES students on their side don't feel that it is necessary to figure out what the teachers are saying in English, or indeed to attend to the English even since they are being told everything they need to know in their own language. If they are not paying any attention to the English, they are unlikely to be learning it as a second language. And even if they did listen, they would be unlikely to get much out of the English they hear; without the requisite adjustments, it does not work as input.

#### 6.4.4. Coordination

A key problem that we observed in the handling of the NES newcomers in our classes was a lack of coordination between teachers and the other instructional personnel who worked with these students. In just three of the classes was there any degree of joint planning or programmatic coordination for NES students. The other teachers did not know what the students were receiving in their pull-out classes, nor did the specialists and aides who worked with the NES students outside of their regular classes apparently know what they were getting there. In the case of the NES students who spent most of their time in pull-out BILP classes, the teachers knew virtually nothing of what they were getting by way of instruction. The teachers seemed to assume that what they were receiving was somehow adding up to a comprehensive program rather than a supplementary one. From our observations, what the students got in those classes was tutoring--but not much in the way of formal instruction. The best coordination we observed was between teachers and regular classroom aides. In just five classes, however, was there frequent and careful planning between teachers and their aides as to what the aides should be doing with the NES students. This was especially true in the two classes in which the TA's were in complete charge of working with the NES students. In both cases, the TA's were highly competent, and as skillful in teaching as were the teachers. Their group lessons--conducted almost entirely in the NES students' L1 were well planned and presented, and the students appeared to profit from them. In other classes, however, the TA's functioned primarily tutors. They provided individual assis-

tance to the NES students and to the other students in the class as needed, and their group work consisted mostly of them supervising groups of students as they worked on assignments. It was primarily in the bilingual classes that the teacher aides were given any real teaching responsibility, in fact, they provided much of the L1 instruction we observed in these classes.

#### 6.4.5. Language Practices

The presence of the NES newcomers in the third and fifth grade classes created a difficult situation for the teachers. As noted earlier, these students were at the point linguistically that the other subjects in this study were two to three years earlier. After two or three years of exposure to English, many of our subjects were able to handle a fairly high level of English. They needed far less help in terms of linguistic adjustments and modification of content, and thus their teachers needed to make far fewer adjustments in their presentation of lessons to these students than they did at earlier stages. The NES newcomers on the other hand needed all of the careful staging and presentation that the more advanced students needed when they first began learning English. The only way that these students could have gotten anything at all--either language input or content--out of the instruction they were receiving in English was for teachers to orient their lessons to their special language needs. As noted earlier, however, (see Chapter 4 especially) the kinds of adjustments needed by the newcomers would have been totally inappropriate for the more advanced students. And thus, the teachers in these classes found

themselves in a quandary. If they included the newcomers in lessons designed for the more advanced students, the newcomers were unlikely to get anything from the experience. If they modified their presentations to make them more appropriate for the NES students, then they lost the more advanced students. They could group the NES students separately, but there were, in most cases, too few of them in a given class to form a reasonable sized group. And so it often happened that these students were included in groups that seemed to be the most appropriate (the low functioning students, or the ones with the most limited English language skills), and they were expected to keep up with the other students. In most cases, the special language needs of the NES students were handled in several ways that have already been mentioned. Teachers and aides tended to use the NES students' L1 (if they knew it) either solely or in translation. It has been noted that this sometimes meant that the NES students were simply not getting the exposure they needed to English.

The NES students in the English only classes received somewhat greater exposure to that language (how much they got depended on how they were handled), but the English they were exposed to was not necessarily useful as input. Our observations of group lessons in English involving the NES students showed that particularly when they were in linguistically heterogeneous groupings, there was far less than optimal usage of the input features that have been found to be critical to language learning in this study. The most frequently observed strategies followed by teachers was to rephrase things when the NES students appeared not to understand what was going on. They



also used demonstrations occasionally to get their points across, but there were fewer instances of such non-verbal communicative strategies used in mixed groups than in groups where everyone was equally limited in the instructional language. The teachers also tended to use more examples and explanations in these groups than they did for students at a more advanced level, but they were not always very helpful. In the following lesson excerpt from one of our English-only classes, one can see the examples provided by the teacher would not be particularly helpful to the very limited English speakers in the group.[2]

[A reading lesson for a small group of Spanish speaking students; Jose who is a very limited in English proficiency has stumbled over the word "drought" in the text. The teacher in this English only class explains:]

Teacher: Drought.

Drought is when there's no rain for a looong  
loooong time. Okay?

We had a flood this year. Too much rain.

When there's no rain for a long long time,  
when the earth gets real dry, and they can't  
grow things, that's called a drought.

Jose: [Looks at Teacher, then back down at his book.]

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[2] This and other reading lessons are being analyzed in a separate substudy being conducted by Leann Parker on the classroom data that have been collected for this project. Ms. Parker is doing a microanalysis on instructional language as input, in which she is comparing language behavior in lessons that facilitated oral and written language development with lessons that did not.



Teacher: Okay. A few years ago in [this city] we had a drought.

We had to careful how much we used.

Do you remember that? You were probably still pretty little. But you had to really be careful because there

wasn't much water. Okay?

So there,--

This is the,

The second part's called "The Drought".

It's gonna be about a time when there's no water for the people.

The teacher's explanation would have worked well enough for students who knew English well enough to have understood what she was saying. It did not work for the very limited English speakers who did not know what was meant by "A few years ago in [this city] we had a drought. You had to be careful how much you used." To interpret this, the students had to know enough English to follow along with the teacher's explanation, and to make the inferences and deductions that were required. Then they might have created an envisionment of the situation she was describing and would have understood what "drought" meant. If they were so limited in their English proficiency that they were unable to understand her explanation, they would have gotten nothing at all out of the hearing it.

Other frequently observed adjustments that teachers made in their language use when working with groups that included NES students were these: slower production, simplifications, and repetitions. Five of the teachers appeared to speak louder than usual when addressing the NES students, but this was not done consistently. Such practices are not particularly helpful since if the student does not understand what is being said, saying it louder will not help matters much. The most careful and useful adjustments tended to be made when the teachers interacted with NES students individually in English, or when they worked with them in homogeneous groupings. Then in the interest of communication, they did what they had to to get their messages across to them.

In general, when NES students were included in group activities, the teachers did try to involve them by calling on them and giving them turns to participate actively. A majority of the teachers (9 of the 15) called on the NES students to participate occasionally during mixed group lessons. The tendency was to call on them to participate in the L1, or to provide some sort of non-verbal response (for example, to solve an arithmetic problem on the board, or to pick a picture from an array which corresponds to a word given by the teacher). Only three of the teachers called on the NES students frequently. All three of them were teachers who were rated high in the instructional practices and patterns of language usage which were found to relate positively to oral language development. In each case, there were large enough numbers of NES students for the teachers to form linguistically homogeneous groups in which the teachers could deal

directly with their special needs.

#### 6.4.6. The Role of Classmates

In general, the NES students in our study classrooms had little contact with classmates who knew enough English to help them linguistically. The English monolinguals had virtually nothing to do with them, and the more advanced LEP students in our classrooms tended not to interact much with the NES newcomers. In only 4 of the 15 classrooms with NES students was there any contact at all between the more bilingual students and the newcomers, and in only 1 of them was there enough to make a difference. The reasons for this may have been social ones: it takes time for newcomers of any kind to establish themselves socially, especially in well-established groups. Some of the children in these classes had been together for 3 to 5 years. Another possibility, however, was that the more established students were reluctant to interact with the newcomers because they did not want to be identified with them. Newcomers tended to be viewed derogatorily by the more established students, be they American born or immigrants themselves. The newcomers were variously referred to as "FOB's"--"fresh-off-the-boat Chinese" (actually jumbo-jets), or "campesinos", hayseed farm kids straight from the ranchito in Mexico. The social gulf between the more established children and the newcomers might not have been so great to the objective observer--it was sufficiently large from the perspective of the children to prevent them from having much to do with one another.

The occasional interactions between NES students and others tended to be with LEP students who were themselves not so well-established. Teachers sometimes seated NES students with bilingual students so they could help them out by translating for them, and explaining things to them as needed. The LEP students did not always understand what was going on, but they did provide a certain amount of help to the NES students in this way. In two classes, bilingual students were assigned to tutor the NES students on reading and math. This was not always as effective as it might have been since the bilingual students (perhaps for the reasons given above) tended to be impatient and not very helpful with the NES students. What they needed was the kind of skilled teaching that we have found to be related to language learning. The bilingual students might have been able to provide a little of it now and then, but they could hardly offer enough such help to have made a difference.

#### 6.5. Summary

In this chapter, we have described the handling of NES students in the classrooms involved in this study. Out of the 15 classes with NES newcomers, only 3 had what appeared to us to be solid programs for these students, 2 others had adequate programs, and the others had minimal or totally inadequate ones.

In the three good classes, all of them bilingual ones, the NES students were grouped homogeneously for instruction for much of the day. There were not enough NES students in any of these classes to

form reasonable sized groups; grouping was achieved by teachers from several classrooms pooling their NES students and sharing in the teaching of these students. For example,, one of the teachers might work with them for a half-hour on reading. Then the students would go to another teacher for a math lesson. After that, they might go to a third teacher for an ESL lesson. Thus, each student received much of his instruction with others who needed essentially as much help with the language as he did. In the three best classes, there was a period of formal ESL for the newcomers at least 4 times each week, and in two of these classes, there was an additional period of oral language development provided by the classroom teacher as well. The students had contact with a variety of teachers in the course of a week. These were the classes with numerous support services: not only did the NES students receive ESL instruction, they also attended reading and math labs outside of the classroom. Most importantly, in these classes as in the other ones which we would describe as adequate, the NES students had ample contact with their own teachers. Their teachers did not simply turn them over to aides and specialists, they spent substantial amounts of time working with the NES students themselves.

The least satisfying experience for the NES students was in the classes where the teachers essentially took no responsibility at all for their educational development. There were, as noted above, 4 classes in which the teachers did not work with the NES students at all, but left them entirely to the care of the TA's or had them spending most of their time with bilingual support personnel in pull-out classes. Even when the NES students were present in the classroom,

they were not included in instructional activities that were going on. They either had individual assignments to work on, or they were completely ignored.

These students obviously needed more help than they were getting. It was apparent that without help, some of the late entering NES students were at serious educational risk. The NES students in the third grade had a better chance of making it in school than those in the fifth grade. The third graders had a few years to learn enough English before they would have to deal with the demands of Junior High School. Indeed many of the fifth grade subjects in the larger study were those who had entered school with no English around the second or third grade, so we might expect the NES students in the third grade classes to do as well as they had by the time they reached the fifth grade. The NES students in the fifth grade classes, however, were in a quite different situation. They were only a year away from junior high school, and unless they learned English in a hurry, they faced the problem of going into a much more linguistically, socially and educationally demanding situation with less than adequate skills in the language of school. It is hard enough to face adolescence being an outsider; to do it without the communicative tools to deal with one's social world can be overwhelming.

There were a few bright spots in our investigation of the educational treatment of NES students. One district, San Francisco Unified, has a program which brings all newcomers to special schools where they are provided with native language support and intensive English instruction for a year or more before they are placed in

bilingual programs in the district's schools. The year of intensive instruction in the newcomer centers provides the students with enough familiarity with English to more or less get by in that language by the time they get to their regular class assignments. This helps both the NES student and the teacher. The student can learn enough English in that time to deal with the instruction he gets in school. The classroom teacher is helped because she does not have to deal continually with the special needs of students who know nothing at all of the school language.

Another bright spot in our investigation was found in a neighboring district, Jefferson High School District in Daly City where an innovative newcomers program makes English speaking students responsible for orienting NES newcomers to the school and community. The District developed a service club at one of its high schools in which English speakers serve as "welcome wagon hosts and hostesses" to the NES newcomers. New students are assigned to orientation specialists, who show them around, help them get acquainted with the school and its facilities, and show them how to deal with the bureaucracy and to navigate the social waters of the school. What has been particularly impressive about this program is that many of the English speaking students have accepted a responsibility not only for helping the newcomers get acquainted when they first arrive, but for helping them learn English and for dealing with their schoolwork as well. This program has had positive benefits for both the NES students and the English speakers. There seemed to be much more goodwill towards the newcomers at the school than one ordinarily finds in urban high

schools.

The apparent success of these two programs, one of them a major structural arrangement devised by the school district, the other a social effort on the part of individuals, show us that the problem of dealing with the continual influx of newcomers is not an intractable one, at least not when there is imagination and a willingness to look for workable solutions.



## CHAPTER 7

### CONCLUSION

The literature on second-language acquisition (see McLaughlin, 1984, 1985) indicates that--contrary to conventional wisdom--second-language learning is not easy and automatic for children. Children, like adults, engage in a great deal more trial-and-error effort, ad hoc hypothesis-testing, and awkward experimentation than second language learning theorists and educators realize. It takes some children as many as six or seven years to master the forms and uses of a new language, and some never succeed. Even in the classroom context where children are daily exposed to the new language and teachers, presumably, are helping them learn it, the process is a difficult and frustrating enterprise for many of them.

This conclusion is borne out by studies of school failure in the United States. In a recent study of high-school dropouts among minority-language children, Steinberg, Blinde, and Chan (1984) noted that individuals from homes where English is not spoken are almost twice as likely to drop out before graduating from high school than are individuals from homes where English is the primary language. If, in addition, the student's primary language is not English, the likelihood of dropping out of school prematurely increases to four times that of English monolingual speakers (40 percent vs. 10 percent).

Many students from language minority background families leave school early because of performance problems in dealing with the instruction they receive at school, although they may have no apparent problems understanding English. Furthermore, there is clear and consistent evidence that academic achievement is lower among students who clearly are not altogether proficient in English. Eight percent of all monolingual English-speaking children in grades 5 to 8 were classified as at least 2 years behind their expected grade level, but 29 percent of all children from non-English-language backgrounds fell into this category (National Center for Educational Statistics, 1978).

The situation in Europe is very similar. A relatively large proportion of the children of immigrant workers in such countries as Germany or Sweden fail to complete their basic education. There are many reasons for this outcome, but it is clear from the findings in this study that instructional, situational and cultural factors are of central importance.

A major conclusion that can be drawn from this research is that the school and teachers can make a major difference in what happens educationally to LEP and NES students. There are some situations that are less conducive to easy language learning than others, but teachers can structure classrooms and provide instruction in ways that maximizes academic and language development even in the most difficult conditions. Our findings indicate that teachers are the key: there is no substitute (say in magical solutions or programs or materials) for teachers who care about what they are doing, and who in fact have figured out or have learned how to communicate ideas and information to

children across languages.

Principals and other administrators play key roles too, according to our findings. It is clear that they can make the situation easier for teachers and students by arranging classes and classrooms in ways that facilitate rather than inhibit learning. It is up to school administrators who are in charge of classroom buildings, for example, to guarantee that teachers do not have to put up with the untenable noise and activity levels that we found in the so-called "classroom pods" (see Chapter 3). The noise and activity levels made the kind of teaching and learning that is required in classes serving LEP students extremely difficult, if not impossible. Teachers can do little about such physical conditions by themselves. Principals play a major role in the success of programs since it is they who decide where to place students. It is extremely difficult for teachers to tailor the instructional program to children even when their classes are fairly stable. But when class composition is kept fluid by the arrival of new students (with no English at all) and the leaving of others, it can be extremely difficult for teachers to know what to do. In order for teachers to deal with the needs of LEP students they have, the school may have to figure out other ways of absorbing newcomers than by placing them in existing classes.

We have seen what an important role cultural factors apparently play in the process of second-language acquisition in bilingual classrooms. The research findings reported herein strongly suggest that the differential patterns of educational success that have long been observed between cultural groups such as the Hispanic and Chinese may

be due to cultural matches and mismatches between group learning styles and school teaching methods and conditions. It was clear that the conditions that favored language development for the Hispanic subjects were sufficiently different than those favoring the Chinese subjects. The Hispanic students were much more sensitive to the quality of instruction they received than were the Chinese who--from all evidence--tended to compensate for teacher differences. The most important point, however, is that in general, the conditions that favored the Chinese children (that is, teacher directed learning in quiet, tightly controlled work-oriented classroom environments) were those that match the conditions that teachers themselves strive to maintain in their classrooms. The ones that favor the Hispanic children (that is, group centered, cooperative learning in somewhat more open, socially-oriented classroom environments) are more difficult for teachers to manage and to keep under control. When the Hispanic students were in classes that were conducive to learning, they made excellent progress. When they found themselves in classes that were not as well suited for them, or when they were with teachers who were not skilled in the techniques of working with LEP students, then they went nowhere. The importance of cultural factors, then, cannot be overemphasized in making sense of the research discussed in this report. In this conclusion we will make some general comments about the importance of these factors.

### 7.1. Summary of the Findings

Our research examined oral language acquisition among Spanish- and Chinese-speaking children in 17 third- and fifth-grade bilingual classrooms. We used assessment instruments especially designed to measure the acquisition of the kinds of language skills needed for successful participation in classroom activities. Our goal was to determine what aspects of classroom structure, teaching practices and patterns of classroom language use had the biggest impact on language learning over the course of a year.

As we analyzed the data, it became apparent that there was no simple answer to the question we had posed. There did not seem to be a straightforward relationship between classroom or teaching variables and language learning in general. In fact, it was only when we looked at differences between students who were low in second language proficiency to begin with and those who were more advanced, that we began to find relationships. Specifically, students who were low in initial English proficiency showed large gains in oral language production scores when they were in classes where they had numerous opportunities to interact with native English-speaking peers. This appeared to be less crucial once they were further along in their learning of English.

Further analyses revealed, however, that this was true to a much greater extent for Hispanic than for Chinese children. In fact, Chinese children who were poor in their initial language abilities in English and who were in classes where there were many opportunities to

interact with native speakers did not show the kind of improvement we found in our Hispanic subjects. In contrast, Chinese children did well in classes where the noise level was low and where teachers closely supervised the learning activities of students, and kept them on task. Chinese children tolerated distractions less, did better when they were in classes in which they received a great deal of personal help and attention from their teachers, and generally performed better the greater the time devoted in class to teacher-directed instruction rather than to self-directed seatwork. The Chinese children seemed much more directly dependent on their interaction with the teacher than was the case for our Hispanic children.

Thus it seems that different kinds of approaches work best with different kinds of children. Hispanic background children seem to profit from the chance to interact with peers who are good language models. Chinese children profit from close interactions with the teacher and other instructional personnel. This suggests that one approach that should be emphasized in classes for Hispanic children is to provide plentiful opportunities for interaction with peers who speak English, whether they be English monolinguals or bilinguals. In contrast, rich and frequent teacher-child interactions seem to help the Chinese children develop the kind of English language skills needed for school. The Hispanic students profitted from good teaching and from good adult language models: in fact, good teaching was crucial to their development of comprehension skills in English. Likewise, the Chinese did eventually profit from opportunities to interact with peers and to learn from them, once they learned enough English to

feel capable of being on their own.

These findings made us aware of the need to take cultural factors into account when examining the effectiveness of various methods of second-language learning. They suggest that while factors such as the quality of input and the type of instruction provided by teachers are important, ultimately there are no simple answers to the very large question of what works, or what works best for LEP students. It is clear that educational treatments interact with group learning styles, and that the quest to increase the effectiveness of schooling for all children has got to begin with efforts to discover what works for different groups. Children do not come to school not empty handed; they bring a wealth of social, cultural, intellectual and linguistic knowledge that they have acquired through prior experiences in the home and in their communities--no matter how humble their circumstances. Their parents have given them a language and a perspective on the world. They have presented them with information on a variety of matters that are of importance to the family and group. The ways in which parents and other members of the cultural group have made this information and knowledge available are tied up with the group's communicative and teaching style. Children's early learning and communicative experiences greatly influence their expectations about how things are going to be done in other settings. This conclusion is supported by research from another perspective, that of classroom ethnography.

## 7.2. The Ethnography of Bilingual Classrooms

In recent years a number of researchers have adopted what has become known as an "ethnographic" approach to classroom analysis (for a fuller discussion, see McLaughlin, 1985). This research approach comes from anthropology, and refers to a careful examination of the social and cultural knowledge that participants in social settings such as classrooms assume and act on in accomplishing whatever activities they are involved in. Ethnographic studies of classrooms typically focus on the knowledge underlying the interactional activities of teachers and students as they work together to accomplish the educational and social goals of the school. The ethnographer attempts to make explicit relationships and behavior patterns that members of a social group leave implicit. In the school context, this means examining the values and goals of the school and of individual teachers, and looking at what is taught and learned formally and informally.

A classic ethnographic study focusing on cultural issues in education is Susan Phillip's (1972, 1983) work on the "acquisition of rules for appropriate speech usage" among school children at the Warm Springs Indian reservation in Central Oregon. By comparing interaction patterns in Indian and non-Indian classrooms and in the Indian community, Philips was able to explain the Indian children's silence and non-participation in traditional classroom lessons. Philips had observed that Indian children were relatively unwilling to perform or participate in classroom learning activities when they had to speak alone in front of other students. On the other hand, the Indian chil-



dren were more willing than non-Indian students to participate in group activities that did not create a distinction between individual performer and audience.

A comparison of the classroom interactional patterns of Indian and non-Indian children showed that Indian first-graders were consistently slower in picking up classroom rules than were the non-Indian children. They tended not to remember to raise their hands and to wait to be called on before speaking; they wandered from one part of the room to another talking with other students while the teacher was talking. Their interest was more in what other students were doing than in what the teacher was doing. Instead of bidding for the teacher's attention, they competed for the attention of their fellow students. Such behavior patterns are at odds with the expectations of traditional classroom teachers. Philips found, however, that the children were behaving in ways that were quite consistent with the public behavioral patterns that were appropriate in their own community. In the Indian community, there were virtually no situation where some one person exercise control over the social and communicative behavior of everyone as in the classroom. Individuals did not have to be recognized or given permission before they could speak and be heard, but talked instead when they felt the urge. Most importantly, people were not put on the spot by being asked to speak (as teachers do when they call on students who have not volunteered and asked them to perform or to respond to elicitation questions) before others. If someone had something to say, he might volunteer it--but he did so when he was ready. This was in stark contrast to the communicative

patterns that existed in the classroom. The mismatch between social expectations and communicative patterns of the school and the Indian community made it quite difficult for the children to function there. The problem for the children was not that they could not deal with the communicative demands of the school (they spoke English fluently), it was that they found the rules of discourse there to be in conflict with everything they knew to be polite and proper social behavior. Their inability to deal with the social demands of the classroom setting drastically affected their academic performance in there.

One of the goals of ethnographic research has been to identify ways in which classroom activities can be structured so as to activate children's energies and competencies, without conflicting with school goals. This was indeed what happened in the school Philips studied. Once it was clear what the problem was, the school was able to restructure its instructional settings in ways to make them more hospitable and appropriate for the Indian children. The teachers were able to change the organization of instructional activities, and their communicative expectations to match those of the students. By the sixth grade, group learning activities predominated in the Indian classrooms, a change which apparently benefitted the students.

Another example of accommodation to the cultural background of minority children is the Kamehameha Early Education Program (KEEP) (Au & Jordan, 1981) for native Hawaiian children. Children from this background performed consistently poorly in school overall, but especially in reading. Ethnographic research (Boggs, 1972; Boggs & Watson-Gegeo, 1978) revealed that in the culture from which these children came,

narrative speech events were marked by "overlapping speech" and a collaborative speech style in which narration was jointly produced. This latter was one which was particularly evident in "talk story" events--story tellings in which children collaboratively produced narratives for themselves or for the sake of others. These children, like the Warm Springs Indian children, were discomforted by the communicative rules and expectations in their classrooms. They seemed to find particularly difficult the rule that one should not speak unless called on, and that only one person at a time should speak. When their teachers called on individuals, several or more children would speak up. It was found that in the native Hawaiian community adults called on children to speak or to answer questions principally when they were accusing them of wrong-doing. In such situations the socially appropriate thing to do was for everyone involved (that is, all of the children involved) to claim some of the responsibility for the misdeed so that no individual would have to absorb full blame. The Hawaiian children were merely acting on their rules of social solidarity when they responded jointly to elicitation questions that teachers were being put to individuals. In fact, they were behaving just as they might during a talk story event in their collaborative responses to teachers' elicitation questions. When teachers incorporated this speech style into their classroom routines and especially into their reading lessons, children began to make significant progress in reading and test scores improved markedly.

The method used in the reading program stressed comprehension rather than a phonics approach and utilized the talk story style. For

example, in a lesson about a frog, the teacher began by asking the children to tell all that they knew about frogs from personal experience. Overlapping speech was allowed, and everyone who wanted to do so could contribute. After an interval, the teacher introduced a text about a frog. The students read this material silently to themselves. After the story was read silently, another round of discussion took place, with the teacher guiding the discussion so as to ensure comprehension. This method contrasts sharply with the usual approach to reading in which each student reads aloud and mistakes are publicly corrected.

There is considerable evidence from ethnographic research that children from minority cultures learn better when classroom interactional patterns match patterns they are accustomed to. All teachers--including those from the same cultural background--need to be conscious of the need to make accommodations to the child's expectations and normal patterns of interaction.

### 7.3. Bilingualism and Biculturalism in the Classroom

Recognition of the native language and culture of the LEP students in educational programs like the ones we have studied has been a goal which is more often talked about than acted upon from our observations in this study. Schools have, for the past fifteen or so years, tried to make cultural accommodations in its curriculum in dealing with the growing diversity in the American student population. Changes have been made in textbooks to include depictions of

multiracial individuals in illustrations and stories. The cultural and social histories of different groups make their way into the school's curriculum and calendar. Ethnic foods find their way onto the school's cafeteria menu. The goal of these well-intended changes in the school's offerings is to incorporate the diversity found in the student body into the common culture of the school, and to instill a sense of belonging and ethnic pride in the students themselves.

But it should be noted that adaptation to the child's cultural background requires more than occasional history lessons or celebrations that are intended to give children from ethnic minority backgrounds a sense of cultural pride. What we would argue for is a much more radical adaptation, where substantial adjustments are made to accommodate to different patterns of learning and interactional style. We are in complete agreement with arguments that Philips and the KEEP researchers have made that what needs to be changed is not our ultimate educational goals for cultural minority groups. These children will need to master all of the academic, linguistic, and social skills and learn all of the information about their, in order to fill the adult roles that will be theirs when they grow up. This implies that mainstream values, patterns of language use, and interactional styles will have to be gradually introduced in the classroom, so that children can acquire them, and eventually make use of them in school and to function in the larger society. However, this can not be accomplished overnight. The school has to begin by creating a situation in which the cultural patterns of the children are recognized and accommodated early on. The classroom environment needs to be adjusted and

made appropriate, and then only gradually can new expectations be introduced.

In this context, "bicultural" means more than giving lip service to one culture or the other. At one extreme is the classroom that is essentially a mainstream classroom with occasional history lessons or celebrations that are intended to give children from ethnic minority backgrounds a sense of cultural pride. At the other extreme--much less common--is the classroom where substantial adjustments have been made to the child's cultural background, but where little is done to prepare the child to go on to the mainstream classrooms or into the mainstream culture.

An effective bicultural program is one in which the child's cultural heritage has a central place in instruction and where there is awareness of patterns of learning, language use and interactional style that are customary in the child's culture. At the same time, mainstream values, patterns of learning, language use, and interactional styles need to be gradually introduced so that the child at least has the opportunity to move out and function in the larger society. The point is not that one set of values or behaviors replaces the other, but that children has access to both sets so that they can form from both their unique bicultural identity.

Cazden, Carrasco, Maldonado-Guzman and Erikson (1980) have argued that bilingual teachers should have proficiency in the child's home language and respect for the child's cultural heritage. In addition, they argued that teachers need to have some awareness of the findings

of ethnographic research on culturally-defined patterns of language use and interaction styles. According to these authors, teacher training should contain an ethnographic element, so that future teachers become more aware of the way cultural assumptions affect their own and their students' language and behavior.

Cardenas and Cardenas (1972), and more recently, Henderson (1980) have argued that many ethnic minority group children, notably those from Hispanic backgrounds, are at risk upon entering school because their patterns of learning behavior as well as their cognitive and social makeup differ from and are incompatible with the norms and expectation that operate in the American classroom. These differences, it appears, do more than just affect the children's functioning in the classroom, they also affect the teacher's expectations of children's abilities and the teacher's response to them personally. Within the school environment, behaviors such as paying attention and persisting at tasks, even when they are not apparently meaningful, are valued. Because of their cultural background, some ethnic minority children may be less able than other children to make the functional adaptation to the interpersonal setting of the school culture. Behaviors such as lack of attentiveness and lack of persistence influence the expectations teachers hold, and these expectations often influence the ways teachers interact with children.

The result can be that the child develops a feeling of learned helplessness that come from experiences with repeated failure. A number of authors have made the point that teachers should encourage cultural and linguistic pride in minority-language children as a means



of instilling a sense of efficacy and worth (e.g., Gibson, 1978; Goebes & Shore, 1978). Henderson (1980) pointed out, however, that such attempts cannot fully accomplish their purpose unless children are helped to experience genuine feelings of personal and social competence within the school setting.

If it is granted that successful education has both a cognitive and an affective element, the importance of bicultural education becomes apparent. Children are likely to be more responsive to a teacher who is sensitive to their culture and its behavior patterns. In fact, Tikunoff (1983) found that successful bilingual teachers utilized information from minority-language children's native culture during instruction to gain maximum participation in instructional activity.

The distinction between cognitive and affective domains is also helpful in conceptualizing what bicultural education means in practice. In many programs, the bicultural component is presented to the children entirely at the cognitive level. Paulston (1978) gave the example of such a so-called "bicultural" curriculum in which one lesson plan had as its aim that "at the end of the lesson, the children will be able to correctly identify the Mexican flag." These and other cognitive activities (history lessons, slide shows on life in Mexico, etc.) do not, Paulston noted, reach the children affectively. Serious bicultural education affirms the value of the home culture and develops in children a positive attitude toward their background.



This approach would seem to require teachers who are not simply fluent in the two languages of the child, but who are from the same cultural background. Indeed, this is the prescription of a number of educators (e.g., Paulston, 1978), although the empirical evidence for the effectiveness of a cultural matchup between teacher and student is ambiguous (McLaughlin, 1985). In the present study, the teachers who proved to be the most effective in terms of helping LEP students develop both academic and English language skills included both those who were of the same culture and those who were not. In any event it seems clear that all teachers need to show appreciation of the cultural values and behavioral patterns of ethnolinguistic minority children. The children are likely to pick up the teacher's sentiments, and it is this affective communication, more than the content of the lessons on the child's cultural background, that will determine how effective bicultural education ultimately is.

The focus of this study has been on the discovering what kinds of instructional practices foster the development of the English language skills that LEP students require for school. We have investigated this question in bilingual and English only classrooms that serve LEP students, and as pointed out earlier, it has not been our intention to compare the effectiveness of these two approaches or types of programs in any way. The bilingual classes were, in no way, representative bilingual programs; that is to say, they were no more representative of bilingual education than the English-only classes were of educational programs in general. On the other hand, the classes that have been studied were not at all atypical of those that serve LEP stu-

dents. The bilingual classes that we investigated made far less use of the students' L1's than we had expected to find in bilingual classes. Indeed on this all-important dimension, the one which in fact should have differentiated the the bilingual classes from the English-only classes, there was far too little difference to have made a comparison between the two types of programs meaningful. We reported in Chapter 3 that the average L1 usage across our bilingual samples was just around 8% (compared to English usage and silence). There were just three classes of our bilingual sample that could have been described as real bilingual classes. The only truly bilingual class was one of the third grade ones (3S2) in which Spanish was used about 24% of the time. The other two were the two bilingual fifth grade classes (5S1 and 5C1) which were more bilingual in spirit than they were in reality, because they averaged only about 8% and 10% usage respectively. In each of these classes, the teachers were not only providing the LEP students with a first-rate educational experience in English which helped them develop high level English skills, they were also providing them with some real educational experiences in their L1's. When English was used for instructional purposes in these three classes, the teachers were careful not to go beyond the level of complexity that the LEP students could handle. The use of the L1 (Cantonese or Spanish) made it possible for the teachers to engage the students in linguistically unconstrained discussions of ideas and experiences occasionally, and in so doing to come to more mature understandings of the subject matter of school. The kind of qualitatively richer experience these children appeared to be having in these three classes is not necessarily quantifiable, at least not

in ways that we were assessing the instructional outcomes of the students in the classes we were studying. What was clear to us was that the children in all three classes appeared to be more involved in learning, and to participate more actively in classroom discussions when they were conducted in the language that they knew best. benefits of this kind of experience may not be immediately apparent, but may take some years to show up even.

#### 7.4. A Final Word

In conclusion, we believe that there is much that can be done to foster second-language learning in classroom contexts. There is a danger, however, that in learning English, the dominant language of the school and the dominant language of the larger culture, children will lose their first language. If this were to happen on a large scale, it would mean the loss of a valuable national resource, bilingual citizens. On a personal level, however, there would be an even greater loss. Children can lose their ability to communicate easily with their own parents, friends, and relatives.

Nowhere in recent literature has this situation been described more eloquently than in a book that argues, paradoxically, against bilingual education. In his autobiographical book, Hunger of Memory, Richard Rodriguez (1982) described how learning English separated him and his siblings from his parents. The school authorities had insisted that his parents speak English--a language they could use but poorly--with their children. Rodriguez wrote:

...as we children learned more and more English, we shared fewer and fewer words with our parents. Sentences needed to be spoken slowly when a child addressed his mother or father. (Often a parent wouldn't understand.) The young voice, frustrated, would end up saying "Never mind"--the subject was closed. Dinners would be noisy with the clinking of knives and forks against dishes. My mother would smile softly between her remarks; my father at the other end of the table would chew and chew his food, when he stared over the heads of his children (p. 23).

Rodriguez ceased to speak, and even to understand Spanish, and so was cut off from his parents, his relatives, and his heritage. He confessed that he continues to be "paralyzed by the thought of his parents' pained faces," but he argued that this was the price to be paid for assimilating into the public society. One wonders if it is not too steep a price--and one that need not be paid at all. A truly bilingual education is one that produces individuals who can talk fluently and comfortably in two languages.

As we end this study of second language learning, we are convinced that LEP students can develop fully adequate English language skills without having to give up their native language. We have been greatly encouraged to discover that although extremely complex, there are clear guidelines that we can offer educators on the design of educational programs that will facilitate language and academic development in students. We have even begun to identify educational programs and approaches that appear to fit the characteristics of the classrooms in our study which, collectively, added up to excellence in academic and language learning outcomes for our subjects.[3] The kind

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[3]One of these is an educational model that was designed by Lois Meyer (1985; Meyer & Marein, 1984) for the American School in Mexico City, and now for San Francisco Unified School District. The bilingual instructional model that Meyer and her colleagues has developed is

of excellence we have in mind requires commitment, effort and support to achieve, however. Teachers can be trained to follow the instructional practices that will lead to language and academic development for LEP students, but they can succeed only if they have the full support of educational policy makers, school administrators and parents.

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one that develops high level second language skills across the curriculum, and has provides students with a functional capability in the second language that is equivalent to that of native speakers. The program depends on sophisticated curriculum planning, and careful training of the teachers. It is a program which depends of committed, well prepared teachers--precisely what we have found to be the most important element of all successful programs for LEP students.

## REFERENCES

- Anderson, R.C. & Freebody, P. Vocabulary Knowledge. Technical Report #136, Center for the Study of Reading, University of Illinois at Urbana-Champaign, August 1979. (ERIC Doc. Reprod. Service #ED 177470 52p PC 4.82 MF .83)
- Au, K. H-P., & Jordan, C. (1981): Teaching reading to Hawaiian children: Finding a culturally appropriate solution. In H. T. Trueba/ G. P. Guthrie/ K. H-P. Au (eds.), Culture and the Bilingual Classroom: Studies in Classroom Ethnography. Rowley, MA.
- Block, J. & Block, J.H. Procedures and instructions for risk taking task- marbles. Unpublished paper, University of California, Berkeley, April 1981.
- Boggs, S. The meaning of questions and narratives to Hawaiian children. In C. Cazden, V. John, & D. Hymes (Eds.), Functions of language in the classroom. New York: Teachers College, 1972.
- Boggs, S., & Watson-Gegeo, K. Interweaving routines: Strategies for encompassing a social situation. Language in Society, 1978, 7:3, 375-392.

- Braun, C. Teacher expectation: Sociopsychological dynamics. Review of Educational Research, 1976, 46 , 185-213.
- Brown, A.L. Knowing when, where, and how to remember: A problem of metacognition. In R. Glaser (Ed.), Advances in instructional psychology. (Vol. 1). Hillsdale, N.J.: Erlbaum, 1978.
- Brown, J.S., Collins, A., & Harris, G. Artificial intelligence and learning strategies. In H.F. O'Neil (Ed.), Learning strategies. New York: Academic Press, 1978.
- Bruner, J. Reading for signs of life. (Review of B. Bettelheim & K. Zelan, On learning to read: The child's fascination with meaning.) New York Review, 1982, 29, 19-20.
- Calfee, R.C. & Calfee, K.H. Interactive reading assessment system. Stanford, California: Stanford University, 1979.
- Cardenas, B. and Cardenas J. A. The Theory of Incompatibilities: A Conceptual Framework for Responding to the Educational Needs of Mexican-American Children. San Antonio, TX: Intercultural Development Research Association, 1972.
- Cazden, C., Carrasco, R., Maldonado-Guzman, A. A., Erickson, F. (1980): The contribution of ethnographic research to bicultural bilingual education. In J. E. Atalis (ed.), Georgetown University Roundtable on Languages and Linguistics, Washington, D. C.
- Collins, A. & Smith, E. Teaching the process of reading comprehension.

sion. Intelligence, in press.

Comprehensive Tests of Basic Skills, Levels C and 1, Form S. Monterey, California: CTB/McGraw-Hill, 1974.

Cross, T. G. Mothers' Speech and Its Association with Rate of Linguistic Development in Young Children. In N. Waterson and C. Snow (Eds.), The Development of Communication. Chichester: John Wiley, 1978.

Cummins, J. Linguistic interdependence and the educational development of bilingual children. Review of Educational Research, 1979, 19, 222-251.

Cummins, J. The construct of language proficiency in bilingual education. In J. E. Alatis (Ed.), Current Issues in Bilingual Education, (Georgetown University Roundtable on Languages and Linguistics). Washington, D. C.: Georgetown University, 1980.

Davis, F. Psychometric research on comprehension in reading. In F.B. Davis (Ed.), Targeted Research and Development Program in Reading with Emphasis on Models. Washington, D.C.: Project No.2, U.S. Department of Health, Education, and Welfare, Contract No. OEC-0-70-4790 (508), Project No. 0-9030, 1971.

Dornic, S. Information processing in bilinguals: Some selected issues. Psychological Research, 1979, 40, 329-348.

Dulay, H. and Burt, M. 1980. The Relative Proficiency of Limited Proficient Students. In J. E. Alatis (Ed.), Georgetown



University Round Table on Languages and Linguistics 1980.

Washington, D. C.: Georgetown University Press, 181-200.

Duncan, S. E. and De Avila, E. A. Bilingualism and Cognition: Some Recent Findings. NABE Journal, 1979, 4, 15-50.

Edwards, A. D. and Furlong, V. J. The Language of Teaching: Meaning in Classroom Interaction. London: Heinemann, 1978.

Far West Laboratory for Educational Research. The Significant Bilingual Features Study. Symposium presented at NABE conference, Washington, D.C., February, 1983.

Ferguson, C.A. Towards a characterization of English' foreigner talk. Anthropological Linguistics , 1975, 17, 1-14.

Fillmore, C.J. Ideal readers and real readers. In D. Tannen (Ed.), Analyzing Discourse: Text and Talk. (Thirty-second annual round table monograph series on language and linguistics.) Georgetown University Press, 1982, 248-270.

Fillmore, C.J. & Kay, P. Text semantic analysis of reading comprehension tests. Progress report (NIE Project 9-0511). Typescript 80 pp., 1981.

Flavell, J.H. Metacognitive development. In J.M. Scandura & C.J. Brainerd (Eds.), Structural/process theories of complex human behavior. The Netherlands: Sijthoff and Nordhoff, 1978.

Gaies, S. The nature of linguistic input in formal second language learning: linguistic and communicative strategies in ESL

teachers' classroom language. In H.D. Brown, C.A. Yorio, & R.H. Crymes (Eds.), On TESOL '77: Teaching and learning English as a second language. Washington, D.C.: TESOL, 1977.

Gibson, G. (1978): An approach to identification and prevention of developmental difficulties among Mexican-American children. American Journal of Orthopsychiatry, 48, 92-113.S

Goebes, D. D. & Shore, M. F. (1978): Some effects of bicultural and monocultural school environments on personality development. American Journal of Orthopsychiatry, 48, 398-407.

Goodman, K.S. & Goodman, Y.M. Reading of American children whose language is a stable rural dialect of English or a language other than English. Final Report, Contract NIE-C-00-3-0087, National Institute of Education, August 1978.

Gumperz, J. Sociolinguistics and communication in small groups. Working Paper #33, Language Behavior Research Laboratory, University of California, Berkeley, 1970.

Hatch, E. M. Psycholinguistics: A Second Language Perspective. Rowley, MA: Newbury House, 1983.

Hatch, E., Shapira, R. & Gough, J. 'Foreigner-talk' discourse. Working paper, Department of English as a Second Language, U.C.L.A, 1975.

Heath, S.B. Ways with words: Ethnography of communication in communities and classrooms. Oxford: Oxford University Press,

1983.

Heathers, G. Home factors in educational attainment. Xeroxed ms., June 15, 1978.

Henderson, R. (1980): Social and emotional needs of culturally diverse children. Exceptional Children, 40, 598-605.

Henzl, V. Linguistic register of foreign language instruction. Language Learning, 1973, 23, 207-222.

Hess, R.D. & Shipman, V.C. Maternal influences upon early learning: the cognitive environment of urban pre-school children. In R.D. Hess & R.M. Baer (Eds.), Early education: Current theory, research, and action. Chicago: Aldine Publishing Co., 1968, 91-103.

Jackson, P. Life in Classrooms. New York: Holt, Rinehart and Winston, 1968.

Karlsen, B.; Madden, R.; & Gardner, E. Stanford Diagnostic Reading Test. New York: Harcourt Brace Jovanovich, Inc., 1976.

Keeves, J.P. Educational environment and student achievement. Melbourne, Australia: Australian Council for Educational Research, 1972.

Krashen, S. Second Language Acquisition and Second Language Learning. London: Pergamon Press, 1981a.

Krashen, S. Bilingual Education and Second Language Acquisition

Theory. California State Department of Education, Schooling and Language Minority Students: A Theoretical Framework. Los Angeles: Evaluation and Dissemination and Assessment Center, 1981b.

Lambert, W. E. An Overview of Issues in Immersion Education. Studies on Immersion Education: A Collection for United States Educators. Sacramento, CA: California State Department of Education, 1984.

Larsen-Freeman, D. An explanation for the morpheme acquisition order of second language learners. Language Learning, 1976, 26 , 125-134.

Legaretta, D. Language choice in bilingual classrooms. TESOL Quarterly , 1977, 11 , 9-16.

Legaretta, D. The Effects of Program Models on Language Acquisition by Spanish Speaking Children. TESOL Quarterly, 1979, 13, 521-534.

Lennon, R. What can be measured? In R. Stauffer (Ed.), The Role of Tests in Reading, Proceedings of Annual Education Conference 9. Newark: University of Delaware Press, 1960, 67-80.

Long, M.H. Input, interaction, and second language acquisition. Unpublished Ph.D. Dissertation, U.C.L.A, 1980.

Long, M.H. Questions in foreigner talk discourse. Language Learning, 1981, 31 , 135-157.

- Long, M.H. Input, interaction and second language acquisition. In Native language and foreign language acquisition. Annals of the New York Academy of Sciences, vol. 379, New York: H. Winitz, 1982.
- Mandler, J.M. & Johnson, N.S. Remembrance of things parsed: Story structure and recall. Cognitive Psychology , 1977, 9 , 11-151.
- Marjoribanks, K. Environment, social class, and mental abilities. Journal of Educational Psychology , 1972, 63 , 103-109.
- Markman, E.M. Realizing that you don't understand: Elementary school children's awareness of inconsistencies. Child Development , 1979, 50 , 643-655.
- McLaughlin, B. (1984): Second-Language Acquisition in Childhood. Volume 1: Preschool Children. Hillsdale, N. J.
- McLaughlin, B. (1985): Second-Language Acquisition in Childhood. Volume 2: School-Age Children. Hillsdale, N. J.
- Meyer, L. Excellence in leadership and implementation: Programs for LEP students. San Francisco Unified School District. 1985. ERIC forthcoming.
- Meyer, L., & Marein, D. Learning English in school: The Mexico City experiment. Paper presented at the TESOL Convention, Houston, TX, March 1984.
- Moll, L.C., Diaz, E., Estrada, E., & Lopes, L.M. Making contexts:

The social construction of lessons in two languages. In S. Arvizu & M. Saravia-Shore (Eds.), Cross-cultural and communicative competencies, New York: Horizons Press, 1982.

National Center for Educational Statistics. (1978): Geographical description, nativity, and age distribution of language minorities in the United States: Spring, 1976. NCES Bulletin, 78-B-5.

Ogbu, J.U. Minority education and caste: The American system in cross-cultural perspective. New York: Academic Press, 1978.

Paulston, C. B. (1978): Biculturalism: Some reflections and speculations. TESOL Quarterly, 12, 369-380.

Philips, S. (1972): Participant structures and communicative competence: Warm Springs children in community and classroom. In C. B. Cazden/ V. P. John/ D. Hymes (eds.), Functions of Language in the Classroom. New York.

Phillips, S. U. The Invisible Culture: Communication in Classroom and Community on the Warm Springs Indian Reservation. New York: Longman Press, 1983.

Rodriguez, R. (1982): Hunger of Memory: The Education of Richard Rodriguez: An Autobiography. Boston.

Schank, R., & Abelson, R. Scripts, plans, goals, and understanding. Hillsdale, N.J.: Lawrence Erlbaum Associates, 1977.

Schulz, J. Language use in bilingual classrooms. Paper presented

at the TESOL annual convention, Los Angeles, March 1975.

Selinker, L., Swain, M., and Dumas, G. The Interlanguage Hypothesis Extended to Children. Language Learning, 1975, 25, 139-152.

Snow, C. E. and Ferguson, C. A. (Eds.) Talking to Children: Language Input and Acquisition. Cambridge: Cambridge University Press, 1977.

Snow, C.E. & Hoefnagel-Hohle, M. School-age second language learners' access to simplified linguistic input. Language Learning , 1983, 32 , 411-430.

Stein, N.L. & Glenn, C.G. An analysis of story comprehension in elementary school children. In R.O Freedle (Ed.), Discourse processing: Multidisciplinary perspectives. Hillsdale, N.J.: Ablex, Inc., 1977.

Steinberg, L., Lin Blinde, P., & Chan, K. S. (1984): Dropping out among language minority youth. Review of Educational Research, 54, 113-132.

Swain, M. Communicative Competence: Some Roles of Comprehensible Input and Comprehensible Output in Its Development, In S. Gass and C. Madden (Eds.), Input in Second Language Acquisition. Rowley, MA: Newbury House, 1985.

Taylor, S., Frackenpohl, H., & White, C. (Eds.) A revised core vocabulary: A basic vocabulary for grades 1-8, Research and

information bulletin no. 5, revised. Huntington, N.Y.: Educational Developmental Laboratories/ McGraw-Hill, 1969(a).

Taylor, S., Frackenpohl, H., & White, C. (Eds.) An advanced vocabulary for grades 9-13. Huntington, N.Y.: Educational Development Laboratories, 1969(b).

Tikunoff, W. J. Effective instruction for LEP students: Five issues from the Significant Bilingual Instructional Features study. Paper presented at Convention for the National Association for Bilingual Education, Washington, D. C., 1983a.

Tikunoff, W. J. An Emerging Description of Successful Bilingual Instruction: An Executive Summary of Part 1 of the SBIF Descriptive Study. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1983b.

Townsend, D. A comparison of the classroom interaction patterns of bilingual early childhood teachers. Unpublished Ph.D. dissertation, University of Texas, Austin, 1974.

U.S. Commission for Civil Rights. A better chance to learn: Bilingual bicultural education. Washington, D.C.: U.S. Government Printing Office, 1975.

U.S. Office of Education. Programs under bilingual education act: Manual for project applicants and grantees, 1971. Washington, D.C.: U.S. Government Printing Office, 1971.

Wagner-Gough, J. & Hatch, E. The importance of input data in



second language acquisition studies. Language Learning, 1975, 25, 297-308.

Wilensky, R. Toward a theory of stories. In W. Lehnert & M. Ringle (Eds.), Strategies for natural language processing. Hillsdale, N.J.: Lawrence Erlbaum Associates, Inc. 1982.

Wong Fillmore, L. Instructional language as linguistic input: Second language learning in classrooms. In L.C. Wilkinson (Ed.), Communicating in the classroom. New York: Academic Press, 1982a.

Wong Fillmore, L. Language minority students and school participation: What kind of English is needed? Journal of Education, 1982b, 164, 143-156.

Wong Fillmore, L. The language learner as an individual. In M. Clarke & J. Handscombe (Eds.), On TESOL '82: Perspectives on language learning and teaching. Washington, D.C.: U.S. Government Printing Office, 1983.

Wong Fillmore, L., Ammon, P., Ammon, M. S., DeLucchi, K., Jensen, J., McLaughlin, B., and Strong, M. Learning Language through Bilingual Instruction: Second Year Report. Submitted to the National Institute of Education. Berkeley, CA: University of California, 1983.

## APPENDIX A

### Research Assistants' Checklist for NES Activity Survey and Video Analysis Coding Sheets

#### #1 Observation Checklist for the NES Activity Survey

|                     |                  | Counter # | to     | Date  | Time   | CLASSROOM ACTIVITY OBSERVATION |   |     |  |  |   |  |   |                                    |
|---------------------|------------------|-----------|--------|-------|--|--------------------------------|---|-----|--|--|---|--|---|------------------------------------|
| NAME                |                  | Student   | Active | I.D.# | CONTENT AREA   | Sil. Oral                      | LANGUAGE SELECTION*                             |     |  | Classroom Org.   |   |  |   |                                    |
|                     |                  |           |        |       |  |                                | Y/A   | C/S | NES                                    |  |   |  |   |                                    |
| IS                  | Thanh V. Tran    |           |        |       | READING  |                                |   |     |  | 1<br>Whole Class Activity                                | 2 | 3<br>Small Group Activity  | 4 | 5<br>Individual Activity           |
|                     |                  |           |        |       | WRITING  |                                |   |     |  |  |   |  |   |                                    |
|                     |                  |           |        |       | SPELLING   |                                |   |     |  |  |   |  |   |                                    |
|                     |                  |           |        |       | LNG ARTS:E   |                                |   |     |  | 1<br>All Students doing same work                        | 2 | 3<br>Some Variety of tasks   | 4 | 5<br>Each child has own task       |
|                     |                  |           |        |       | LNG ARTS:L <sub>1</sub>  |                                |   |     |  |  |   |  |   |                                    |
| TARGET              | Jason Chan       |           |        |       | MATH   |                                |   |     |  | 1<br>NES with mixed monol.-biling group                  | 2 | 3<br>NES with biling. group only                                     | 4 | 5<br>NES with other NES only       |
|                     | John Cui         |           |        |       | SCIENCE  |                                |   |     |  |  |   |  |   |                                    |
|                     | Jimmy Lac        |           |        |       | SOC.STUD.  |                                |   |     |  | 1<br>Teacher assigns activ. and parts                    | 2 | 3<br>Some student choice of altern. parts in teacher-assigned activ. | 4 | 5<br>Students select activity      |
|                     | Joyce Lee        |           |        |       | LIBRARY  |                                |   |     |  |  |   |  |   |                                    |
|                     | Simon Lee        |           |        |       | MUSIC  |                                |   |     |  | 1<br>Teacher controls activ--who speaks when, what doing | 2 | 3<br>Teacher controls but some student autonomy & control            | 4 | 5<br>Students control activ        |
|                     | Stephanie Poon   |           |        |       | ART  |                                |   |     |  | NES Participation  |   |  |   |                                    |
|                     | Kim Ta           |           |        |       | P.E.   |                                |   |     |  | 1<br>NES freq. called on to speak                        | 2 | 3<br>NES sometimes called on to talk                                 | 4 | 5<br>NES never called on to speak  |
|                     | David Tang       |           |        |       | FREE TIME  |                                |   |     |  |  |   |  |   |                                    |
|                     | Gordon Tsun      |           |        |       | ANNOUNCEN.   |                                |   |     |  | 1<br>NES freq.called on for NV participation             | 2 | 3<br>NES sometimes called on for NV particip.                        | 4 | 5<br>NES never called on for NV pa |
|                     | Elaine Wong      |           |        |       | CLASS ROUTINE:   |                                |   |     |  |  |   |  |   |                                    |
| OTHER CLASS MEMBERS | Johnson Wong     |           |        |       | OTHER:   |                                |   |     |  | 1<br>NES freq. volunteers for verbal particip.           | 2 | 3<br>NES sometimes volunt. for verbal particip.                      | 4 | 5<br>NES never vol. for verbal par |
|                     | William Yue      |           |        |       | *LANGUAGE SELECTION CODES<br>One language only: EO, SO, CO<br>Language Mixing: E+ S, S+ E, E+ C, C+ E<br>E=S, E=C<br>Translation: E→S, S→E, E→C, C→E |                                |   |     |  | 1<br>NES freq. vol.NV                                    | 2 | 3<br>NES sometimes vol.NV  | 4 | 5<br>NES never NV vo               |
|                     | A co Xiong       |           |        |       |  |                                |   |     |  | 1<br>NES highly involved                                 | 2 | 3<br>NES somewhat involved   | 4 | 5<br>NES not involve               |
|                     | Koon San Lau     |           |        |       | COMMENTS: (Occurrence of anything unusual?, any especially interesting verbalization or interaction, etc.)   |                                |   |     |  | 1<br>High task confusion                                 | 2 | 3<br>Some task confusion   | 4 | 5<br>No task confus.               |
|                     | Marvin Armstrong |           |        |       |  |                                |   |     |  | Teacher techniques                                       |   |  |   |                                    |
|                     | Henry Choy       |           |        |       | 1<br>Freq. use of rephras., stress, slowing, etc   | 2                              | 3<br>Some use of "verbal" techniques to clarify | 4   | 5<br>No use of "verb. techn. to clarif |  |   |  |   |                                    |
|                     | Michael Hickman  |           |        |       | 1<br>Freq. use of NV demonstrations, etc.  | 2                              | 3<br>Some use of NV demonstrations, etc         | 4   | 5<br>No use of NV demonstrations       |  |   |  |   |                                    |
|                     | John Hui         |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
|                     | Macking Lee      |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
|                     | Mary Lee         |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Eric Ng             |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Judy Ngo            |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Giao Nguyen         |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Daisie Yee          |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Fong May Sai        |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Flora Toy           |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Jennifer Yee        |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| Lily Yu             |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |
| CACHER: Jones Wong  |                  |           |        |       |  |                                |   |     |  |  |   |  |   |                                    |

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# 2 NES Debriefing Questionnaire

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# NES DEBRIEFING QUESTIONNAIRE

- 1) Class Code \_\_\_\_\_ 2) Observer \_\_\_\_\_
- 3) Type Class: (Circle one) Bilingual ESL 4) Date NDQ filled out \_\_\_\_\_
- 5) Who are the NES\* students in your class, and when did they start in your classroom (or in an English-speaking classroom)? Where did they come from originally? Identify subgroups of NES if later you are going to talk about some being treated one way and others another way.

| Name     | Date of Entry<br>(month and year) | Subgroup<br>(A,B,C,etc.) | Where from |
|----------|-----------------------------------|--------------------------|------------|
| a. _____ | _____                             | _____                    | _____      |
| b. _____ | _____                             | _____                    | _____      |
| c. _____ | _____                             | _____                    | _____      |
| d. _____ | _____                             | _____                    | _____      |
| e. _____ | _____                             | _____                    | _____      |
| f. _____ | _____                             | _____                    | _____      |
| g. _____ | _____                             | _____                    | _____      |
| h. _____ | _____                             | _____                    | _____      |
| i. _____ | _____                             | _____                    | _____      |
| j. _____ | _____                             | _____                    | _____      |

\* For the purposes of this project, NES students will be defined as those who have become students in a school using English for instruction either during this current school year (Fall 1981-Spring 1982) or during last year's school term (Fall 1980-Spring 1981)

- [illegible]

- [illegible]

8. In the beginning of the year, were the NES students integrated into your class for activities other than those mentioned above in #6 -- e.g. classroom routines, class projects, music, art, PE, recess, etc.? YES NO

If they were integrated for some of these activities, indicate this information below.

| <u>Name of Student or Subgroup Designation</u> | <u>Activities in which these students were integrated with rest of class</u> | <u>Language used in this activity (Engl/L1)</u> |
|--|--|---|
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9. Has the situation regarding integration into class activities changed for any of the NES students? YES NO  
 If "yes", when did this change take place? \_\_\_\_\_ (month&year or gradually)  
 If the situation has changed from what you described above, fill out the sections below.

| <u>Name of Student or Subgroup Designation of NES</u> | <u>Activities in which NES students are now integrated with rest of the class</u> | <u>Language used in these activities (Engl./L1)</u> |
|---|---|---|
|   |   |   |
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|   |   |   |

- YES NO

Name of ESL Instructor \_\_\_\_\_

Position of Instructor \_\_\_\_\_

In classroom

Other classroom

Other pull-out location:

Received ESL Instruction

### Frequency of Session

Length of  
Session

What instruction consisted of:  
(What taught & how taught)

[illegible]

Other comments about this ESL instruction not noted above or for which insufficient space was allotted above:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- YES NO

If the situation has changed, fill out the sections below. (Mark "same" where no change)

Name of ESL Instructor

Position of Instructor \_\_\_\_\_

(Circle one)

In classroom

Other class

nom. Other pull-out loc

schl. Now Receiving ESL Instruction

### Frequency of Sessions

### Length of Sessions

What instruction now consists  
of (content and method)

[illegible]

YES NO Can't tell NOT APPLY



Name of NES student or  
NES subgroup designation  
(Describe target subj.'s  
on last line)

% Time Content in Following Content Areas  
Taught <sup>or translated</sup> in L<sub>1</sub> to this NES student or grp.  
Reading Math Soc St. Science Other:

% time asides or ?'s  
addressed to these  
NES in L<sub>1</sub> while in  
whole class lesson, et

Regular Target Subjects:

Name of NES student or  
NES subgroup designation  
(Describe target subj.'s  
on last line)

% Time Content in Following Content Areas  
Taught or Translated in L<sub>1</sub> to this NES  
student or group

| <u>Reading</u> | <u>Math</u> | <u>Soc St.</u> | <u>Science</u> | <u>Other</u> |
|----------------|-------------|----------------|----------------|--------------|
|----------------|-------------|----------------|----------------|--------------|

% time asides or ?'s  
addressed to these  
NES in L<sub>1</sub> while in  
whole class lesson, et

- [illegible]

- If the situation has changed, when did this change occur? \_\_\_\_\_

[illegible]

- YES NO If "yes", specify what types of things were done in the section below.
- | Name of NES student or<br>Subgroup Designation | Separate lessons about English<br><u>Grammar</u>                              | Vocabulary | Explanations in asides in lesson<br><u>Grammar</u> | Vocabulary |
|--|---|------------|--|------------|
|  | (Use codes 0=never, 1=once in while, 2=sometimes, 3=many times, 4=very often) |            |  |            |

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Target Subjects

- If the situation has changed, when did this change occur? \_\_\_\_\_
- If the situation has changed, fill out the section below.

[illegible]



[illegible]

- If the situation has changed, when did this change occur? \_\_\_\_\_

If the situation has changed, complete the section below.

[illegible]

22. In the beginning of the year, when your NES students were given free time in the classroom, what did they tend to do, and with whom did they tend to do this (i.e., other NES, LES students (target), Anglos, Blacks, or others) and how often with each type (use frequency codes 0-4 as before)?

[illegible]

23. Has the situation relating to what NES students do with their free time in the classroom changed since the beginning of the year? YES NO

If the situation has changed, when did this change occur? \_\_\_\_\_

If the situation has changed, complete the section below.

[illegible]

24. In the beginning of the year, when your NES students were given free time during recess, what did they tend to do, and with whom did they tend to do this (i.e., other NES, LES students (target), Anglos, Blacks, or others) and how often with each type (use frequency codes 0-4 as before)?

[illegible]

25. Has the situation relating to what NES students with with their free time during recess changed since the beginning of the year? YES NO

If the situation has changed, when did this change occur? \_\_\_\_\_

If the situation has changed, complete the section below.

[illegible]

# 3 Video Analysis Coding Sheets

First page: Index sheet for video target subjects

Second page: Checklist of teacher and student behaviors



10-1

| NAME                         |  | Brief<br>Applic. | Active | I.D.F. | Counter #      | to        | Date                | Time | VIDEO ANALYSIS INDEX: SPECIAL TARGET SUBJECT |   |   |   |   |                                 |
|------------------------------|--|------------------|--------|--------|----------------|-----------|---------------------|------|--|---|---|---|---|---------------------------------|
|                              |  |                  |        |        |                |           |                     |      | Classroom Code: _____<br>Coder Name: _____   |   |   |   |   |                                 |
|                              |  |                  |        |        | CONTENT AREA   | Sil. Oral | LANGUAGE SELECTION* |      | Classroom Org.                               |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           | T/A                 | C's  | S*   | 1   | 2 | 3   | 4 | 5                               |
| SPECIAL TARGET SUBJECTS:     |  |                  |        |        | READING        |           |                     |      |  | Whole Class Activity                                |   | Small Group Activity  |   | Individual Activity             |
|                              |  |                  |        |        | WRITING        |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | SPELLING       |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | LNG ARTS:E     |           |                     |      |  | All Students doing same work                        |   | Some Variety of tasks   |   | Each child has own task         |
|                              |  |                  |        |        | LNG ARTS:L     |           |                     |      |  |   |   |   |   |                                 |
| OTHER TARGET SUBJECTS & NTS: |  |                  |        |        | MATH           |           |                     |      |  | S* with mostly monolingual group                    |   | S* with evenly mixed monol-bil.grp.                             |   | S* with mostly biling. group    |
|                              |  |                  |        |        | SCIENCE        |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | SOC. STUD.     |           |                     |      |  | Teacher assigns activ. and parts                    |   | Some student choice of altern. parts in teacher-assigned activ. |   | Students select activity        |
|                              |  |                  |        |        | LIBRARY        |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | MUSIC          |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | ART            |           |                     |      |  | Teacher controls activ--who speaks when, what doing |   | Teacher controls but some student autonomy & control            |   | Students control acti           |
|                              |  |                  |        |        | P.E.           |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | FREE TIME      |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        | ANNOUNCEM.     |           |                     |      |  | S* Participation                                    |   |   |   |                                 |
| OTHER CLASS MEMBERS          |  |                  |        |        | CLASS ROUTINE: |           |                     |      |  | S* freq. called on to speak                         |   | S* sometimes called on to talk                                  |   | S* never called on to speak     |
|                              |  |                  |        |        | OTHER:         |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | S* freq. called on for NV participation             |   | S* sometimes called on for NV particip.                         |   | S* never called on for NV p     |
|                              |  |                  |        |        |                |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | S* freq. volunteers for verbal particip.            |   | S* sometimes volunt. for verbal particip.                       |   | S* never vol for verbal pa      |
|                              |  |                  |        |        |                |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | S* freq. vol. NV                                    |   | S* sometimes vol. NV  |   | S* never NV v                   |
|                              |  |                  |        |        |                |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | S* highly involved                                  |   | S* somewhat involved  |   | S* not involv                   |
|                              |  |                  |        |        |                |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | High task confusion                                 |   | Some task confusion   |   | No task confus.                 |
|                              |  |                  |        |        |                |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | Teacher techniques                                  |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | Freq. use of rephras., stress, slowing, etc         |   | Some use of "verbal" techniques to clarify                      |   | No use of "verb. techn. to clar |
|                              |  |                  |        |        |                |           |                     |      |  |   |   |   |   |                                 |
|                              |  |                  |        |        |                |           |                     |      |  | Freq. use of NV                                     |   | Some use of NV  |   | No use of NV                    |

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# VIDEOTAPE ANALYSIS: Checklist of key Teacher and Student Behaviors

Classroom Code: \_\_\_\_\_  
Videotape Code: \_\_\_\_\_  
Counter # \_\_\_\_\_ to \_\_\_\_\_

## TEACHER

### TEACHER INPUT

|  |  |
|--|--|
|  | Language Tutoring (Modeling answers, or pattern of answers, labeling, lang. explanation, expansions, or corrections of child utterances) |
|  | Eliciting Language (Questions, prompt slots, prompt say, calling on)   |
|  | Teaching: Formatting (Instructional directives, announcements, etc.)   |
|  | Teaching: Content - V (Providing information, giving explanations, etc.)   |
|  | Teaching: Content - NV (Demonstrations, etc.)  |
|  | Modifying Previous Utterance (Upgrading, varying or paraphrasing, downgrading, repeat+, repeat-)   |

### TEACHER FEEDBACK AND RESPONSE

|  |   |
|--|---|
|  | Evaluative Feedback to answer or utterance (Evaluate, correct)          |
|  | Confirming, Acknowledging Feedback (Got it, right, didn't get it, huh?) |
|  | No Feedback (No response, ignore)                                       |
|  | Request Feedback or Confirmation of Understanding                       |
|  | Rescue - By Translating or Prompting in L <sub>1</sub>                  |
|  | Rescue - By Answering For child or Modeling                             |

### TEACHER SOCIAL CONTROL AND RESPONSE

|  |   |
|--|---|
|  | Behavioral Directives (including Attention requests)  |
|  | Evaluating Behavior (Reprimanding or Praising Behav.) |
|  | Compliance to Directive or Request for Behav.         |
|  | Rejection of Directive or Request for Behav.          |

## TARGET STUDENT

### STUDENT GETTING AND USING HELP

|  |  |
|--|--|
|  | Questions about Language (How say, request repetition, request feedback about speech)  |
|  | Questions about Content  |
|  | Making Do (L1-L2 combined, routines, formulas, pretend words, circumlocutions, fragments, etc.)  |
|  | Imitations (repeating model, spontaneous imitation of self or others)  |
|  | Practice (Language practice, word or sound play, etc.)   |
|  | Avoid (Use of L <sub>1</sub> or L <sub>2</sub> to avoid use of other, stall, laughter, no response, nonverbal response to avoid verbal response) |

### CHILD INITIATIONS AND PARTICIPATION

|  |  |
|--|--|
|  | Information/Participation (answering, commenting, recounting, asserting, volunteering, instructional directives to other children) |
|  | Language Tutoring (for other children)   |
|  | Evaluative Feedback to other children about language or content answers (Evaluate, Correct)  |
|  | Demonstrate (Give nonverbal demonstrations to clarify meaning for other children)  |

### CHILD SOCIAL AND BEHAVIORAL CONTROL AND RESPONSE

|  |   |
|--|---|
|  | Behavioral Directive (including attention requests)     |
|  | Evaluating Behavior (reprimanding or praising behavior) |
|  | Compliance to Directive or behavioral request           |
|  | Rejection of Directive or behavioral request            |
|  | No Response to Directive or request (ignore, NR)        |
|  | Complaint (including tattling)                          |

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Transcript of Stimulus TapeThe Shell Game

- Item 1: Hello there! We are going to begin our science lesson in just a second, but before we do, you need to get yourself ready. Look on the table near you: you will find a pair of earphones. Put them on so you can hear me better. If you need help getting them on, ask my helper who is sitting there right beside you to show you how they go on.
- Item 2: Have you got them on?
- Item 3: Raise your hand if you can hear me through the earphones.
- Item 4: There's also a little microphone on the table. Put it on your collar. If you have trouble, ask my helper to show you how to do it.
- Item 5: When I ask you a question I want you to answer out loud. Let's try it out. Say your first name.
- Item 6: Did you hear yourself? Would you repeat your name for me?
- Item 7: And now, say your whole name.
- Item 8: Good! Now tell me what school you go to, and what your teacher's name is.
- Item 9: Fine! Now let's get started. This lesson is going to be about seashells. My helper will show you a seashell so you will know what we are going to be talking about. I'll be telling you some things about shells, and the animals that live in them. Then I'll ask you some questions about the things I have told you. Remember what I told you to do when I ask you questions? What are you supposed to do when I ask you a question?

- Item 10: You're going to answer by speaking out loud. Let's try it out. What's this lesson going to be about?
- Item 11: It's going to be about shells and the animals that live in them! Now, if you look under the table you'll see two boxes. Don't touch them yet! Just look!
- Item 12: One box has a picture of a shell on top. What does the other box have on it?
- Item 13: Pick up the box with the picture of the shell, and put it on the table. Push the other box out of the way so you won't step on it.
- Item 14: OK! Now, open the box.
- Item 15: When you have opened it, tell me what you find inside the box.
- Item 16: Did you find three sheets of paper?--a white sheet, one that's brown, and a black one?
- Item 17: Did you also find two bags with shells in them?
- Item 18: Before we begin, I want you to arrange the three sheets of paper on the table in front of you. First lay the white sheet down on the table right in front of you. Then put the black sheet to the right of the white sheet, and the brown on the left so that the white sheet is between the black and the brown.
- Item 19: I want to be sure you have the paper laid out just the way I said, so will you ask my helper to take a look at what you have done? Would you ask 'em if it looks right?
- Item 20: Now take a look at the bags of shells that were in the box.  
Pick up the bags and look at them, but don't take the shells out yet. Each bag has different kinds of shells in it, and is numbered. Can you find the numbers on the bags? What are they?
- Item 21: Put bag number two back in the box.
- Item 22: Let's begin by taking the shells out of bag number one. Take them out carefully and lay them out on the black paper so you can see them.

- Item 23: Several of the shells look like round fans. They have ridges--raised lines--on their backs. Feel the top of these shells with your fingers and you'll feel the ridges.
- Item 24: Can you tell me what ridges are?
- Item 25: They're raised lines you can feel! Now look for a shell with a row of holes across it.
- Item 26: Did you find it?
- Item 27: Some of the holes are open, some are not. How many of the holes are completely open? Count them out loud.
- Item 28: Now take a look at that shell and tell me what it looks like. How would you describe it?
- Item 29: Turn the shell over now. What about that side? Can you describe it?
- Item 30: OK, now put the shell back on the paper with the others, and I will tell you some things about the animals that used to live in these shells.  
These shells are all empty now. There's nothing in them. But they used to have marine animals living in them. For marine animals that live in shells, the shell is like their home and it protects them from harm. Marine animals are animals that live in the sea. They stay in the water.
- Let's see if you remember what I've just said: What can you tell me about marine animals?
- Item 31: Can you tell me something about marine animals that have shells? What is the shell for?
- Item 32: OK, marine animals that have protective shells are called mollusks. They can't live without shells. Now you tell me: What is a mollusk?
- Item 33: They're marine animals that have protective shells! They need shells because they don't have bones. The shells are like their homes. They stay in their shells, and their shells keep them from harm. Now can you tell me why they need shells?

- Item 34: What do you think would happen to these little animals if they had no shells?
- Item 35: Can you think of any other creatures that have shells to protect them?
- Item 36: Did you think of garden snails?
- Item 37: What about turtles?
- Item 38: All right, now look at the starfish. That's the biggest thing on the paper. I'll bet you know why it's called a starfish. Can you tell me?
- Item 39: It's shaped like a star, isn't it? Now touch the starfish and tell me what it is like. Can you describe it?
- Item 40: It's rough and it has little white bumps all over it, doesn't it?
- Item 41: Now turn the starfish over, and describe the other side.
- Item 42: It's got a grooved star cut into it. as you see. The starfish is not a shell. It doesn't have a shell at all. It's a marine animal, but it ISN'T a mollusk. Can you tell me why it isn't a mollusk?
- Item 43: If you said it wasn't a mollusk because it doesn't have a shell, you are right! It isn't a mollusk because mollusks are marine animals that have shells, and the starfish doesn't have a shell. So now, if someone asked you why the starfish isn't a mollusk, what would you say?
- Item 44: It isn't a mollusk because it doesn't have a shell! OK, now leave these shells on the black paper, and get the other box with the picture of the fish on it from under the table.
- Item 45: Put this box right on your white paper.
- Item 46: Fine! Now open up the box and tell me what you see. Describe the inside of the box for me.
- Item 47: The box is fixed up to hold a shell collection. You can help me put the shells where they belong. The words that you see tell you which shells go in each space. But these names are a little hard for you to read, so I will help



you out by telling you where each shell goes. Then you can help me arrange the collection. Now, if you will pull the black paper with the shells on it just a little closer to you, we can begin.

- Item 48: First, take a look at the fan-shaped shells with ridges. Find the largest one of these and put it in the small yellow space in the box.
- Item 49: OK--now get the starfish and put it in the big blue space in the center of the box.
- Item 50: OK? Now take the shell with the holes and put it in the large yellow space.
- Item 51: Fine, now why don't you put the rest of the shells in the blue space with nothing in it.
- Item 52: Now that you've done that, can you tell me where everything is so I can be sure you have done what I have asked? I want you to be sure to say where each thing is--the starfish, the ridged shell, the one with the holes and all the rest of the shells.
- Item 53: OK, then. Now let's get the other bag of shells from the shell box.
- Item 54: Take the shells out of the bag carefully and lay them out on the brown paper so we can see what we've got. How are these shells different from the ones you have already arranged in the box?
- Item 55: OK, now find a shell that has a tiny starfish glued on it. Pick it up and look at it, but don't pick the star off!
- Item 56: This shell is called a CONESHELL. Would you say that? CONESHELL.
- Item 57: Put this coneshell with the starfish on it in the big green space in your box.
- Item 58: Now find another coneshell, and put this one on top of the big starfish that's already in the box.
- Item 59: Now there are two coneshells in the box. Show my helper the coneshell with the starfish on it.

- Item 60: That's fine. Now let's look at the other shells. The rest of the shells on your paper are sea-snail shells. The creatures that lived in them were soft and squishy, just like the snails in your yard. Their shells are like little houses that they can carry along with them. Hold one of the shells up and peek inside it.
- Item 61: There's nothing inside the shell anymore. What do you suppose has happened to the snail?
- Item 62: If someone asked you what kind of creature lived in these shells, what would you say? What could you tell him about seasnails?
- Item 63: How would you describe the shell?
- Item 64: Now then, if you look at all of the snail shells on the paper, you'll notice that they do not all look alike. There are two kinds of snail shells there. Can you tell me how the two kinds are different?
- Item 65: You noticed, I'll bet, that some of the snailshells are pinkish in color, and these pink ones have spikes or little points sticking up all over them. So what are spikes?
- Item 66: Spikes are little points that stick up. And these pink spiked shells are different from the ones that are gray in color and are smooth. Pick up all of the smooth gray snailshells and put them in the orange space in your box.
- Item 67: Now put the pink spiky shells in the small red space in the box.
- Item 68: Oh! There's a space in your box with nothing in it! Find it and show it to my helper.
- Item 69: What do you think about putting the coneshell that's on the starfish in that last space? It would be better there than on top of the starfish, wouldn't it?
- Item 70: Good! And now you've helped me get the collection all arranged in the box, and we are done with the lesson. Cover up the box with its lid, and put the three sheets of paper on top of it.
- Item 71: Is that done? Thanks for helping me with this lesson. Take off your earphones--you've been great! Goodbye.



## THE ROCKY HORROR TEST

1. Hello! We will begin our lesson in just a minute. For this lesson, you will need some things that are on the table right in front of you--a pair of earphones and a tiny microphone. Put the earphone on first. Then clip the microphone on your collar. If you need help, ask my assistant who is there with you to give you a hand.
2. Did you put on the earphones first?
3. Tell me where you put the microphone.
4. Now then, can you hear me OK?
5. I'll be asking you some questions in this lesson, and I want to be certain I can hear your answers. Please speak clearly right into the microphone each time, otherwise I won't be able to hear you. Let's try it out. Say your name for me--your whole name, please.
6. Were you able to hear yourself?
7. Fine. Let's begin. This lesson is a science lesson about rocks. I'll be telling you about different kinds of rocks: what they are made of, how they get formed, and what we can do with them. Then I will ask you some questions about the things I have told you. Do you remember what I told you to do when you answer my questions?
8. Can you tell me why you need to speak directly into the microphone?
9. I won't be able to hear you unless you do! Let's try another question, and see how your answer sounds. What is the lesson going to be about?
10. It's going to be about rocks--different kinds of rocks, what they are made of, how they are formed, and what you can do with them. You will need some materials for this lesson which my helper can give you. Tell'em when you're ready to look at the materials.
11. Did you get a box and a big envelope?
12. Open the envelope, but not the box.
13. Can you tell me what's inside the envelope?
14. You found three sheets of paper inside, didn't you? Show my helper the yellow sheet first (pause), then the blue sheet (pause), and finally, the green one.

-2-

15. Now arrange them side by side in front of you so that the yellow sheet is between the other two.
16. Now let's make sure that I know where everything is. Where is the blue sheet?
17. And how about the green and yellow sheets?
18. Now open the box. You'll find three bags of rocks inside. The bags are numbered. We're going to use bag #1 first. Take that bag out, and leave the other bags inside the box.
19. Take the rocks out of bag #1 and put them on the yellow paper in front of you.
20. Some of these rocks look like pieces of glass. Put the ones that do in the big square on the green paper.
21. Each of these rocks has flat sides. Feel one of the sides with your finger and tell me how you would describe it.
22. Did you say that it was smooth, hard and cool? The rocks that look like glass are called crystals. Crystals have flat sides and sharp edges. Many of them are clear. That means you can see through them. Hold up one of the crystals and look through it. Can you see through it?
23. Now what can you tell me about crystals?
24. They have flat sides and sharp edges, and some of them are clear. Do you remember what it means to say something is clear?
25. When something is clear, you can see through it. How are these crystals different from the other rocks you took out of bag #1?
26. The crystals are like glass and you can see through them. The others are not clear--you cannot see through them. OK, now put the crystals back in the big square on the green sheet.
27. All of the rocks that were in this bag are called igneous rocks. That means they were formed by heat. Many years ago, when the earth was young, much of its surface--the ground--was molten. Molten means melted--when rock is very hot, it turns into very thick liquid or goopy syrup. When the earth cooled, its molten surface hardened into rock. OK, all of the rocks you have in front of you are igneous, which means they were formed by heat. Now can you tell me what igneous rocks are?

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28. Igneous rocks are rocks that were formed by heat long ago. But not all igneous rocks were formed when the earth was young. Even today, there are places on the earth where the surface is still molten. Can you guess what kinds of places these might be?
29. Did you guess volcanos? If you did you were right. Volcanos are mountains that are formed where the earth's surface is thin. The molten rock that is just underneath the surface blows a hole through the ground and the molten rock comes out in a big eruption. This kind of rock is called lava. There is a piece of lava among the rocks on your yellow paper. Can you guess which one it is?
30. The lava is the biggest piece of rock in front of you. Pick it up and describe it for me.
31. Lava is rough and has a lot of little holes with sharp edges. Now let's see if you remember what I told you about where lava comes from. Can you tell me what you remember?
32. Lava is rock that comes out of volcanos when they erupt. Put the lava on one of the small squares on the green paper.
33. Now look for the rock that's got a pointed tip. Did you find it? Hold it up and look at it very carefully.
34. This rock is special. It's a kind of igneous rock that's very hard. It's so hard, the Indians used it for cutting things. An Indian made the piece of rock you have in your hand into an arrowhead. Look at it and describe what it looks like.
35. The arrowhead has a smooth flat surface and a pointed tip, as you see. It has a smooth flat side, but it isn't a crystal. Can you tell me how you can tell it isn't a crystal?
36. If you said it isn't a crystal because you can't see through it, you're right. It is formed by heat like the other igneous rocks, but it isn't a crystal. Now put the arrowhead in the small square that is left on the green paper, and take bag # two from the box.
37. These rocks are different. They were not formed by heat; they were formed by water. One of them was formed from sand that was washed into the sea from the land. It is called sandstone. If you look carefully, you'll find a rock that is layered. It has marks on its side that look like stripes. Can you find it?
38. The stripes mark layers in this piece of sandstone. Each layer of sand was washed into the sea at a different time. Now tell me what you know about how sandstone is formed.

39. It was formed from layers of sand washed into the sea from the land. Put this piece of sandstone in the ~~small~~ square on your blue paper.
40. Now look at the other two stones from bag #2. These are limestones. They were also formed by water, but they are not made from sand. Limestone was made millions of years ago out of the shells and bones of tiny sea animals that died and sank to the bottom of the sea. Take a look at the smaller piece and tell me what it is like.
41. It looks like chalk, doesn't it? Put this piece of limestone on the other small square on the blue sheet, and pick up the other piece of limestone from the table and look at it.
42. Sometimes we find fossils in limestone. Fossils are the remains of larger plants and animals that got buried in the sea. See if you can find any fossils in this piece of limestone. Can you tell me how they might have gotten in there?
43. The shells must have gotten buried among the tiny animals that turned to limestone, right? Put this piece of limestone in the big square on the blue paper.
44. Now take a look at how you have the rocks arranged. The rocks on the blue paper were formed by water. Do you remember how rocks on the green paper were formed?
45. Did you remember that those rocks were formed by heat? Now let's see if everything is placed where it should be. I want you to tell me where each rock is. Be sure to say where you put the crystals, the arrowhead, the lava, the sandstone, and the two pieces of limestone.
46. OK then, let's take a look at the last bag of rocks--the one that's left in the box. Can you put the rocks from that bag on the yellow paper?
47. The rocks in this bag were first formed by water. All of them have been changed over time. Take a look at the light colored rock. Did you find it?
48. This rock used to be a piece of limestone, but it was changed into marble by heat and pressure. Does it look like the limestone that you have on the blue paper? How is it different?
49. It's a lot harder than limestone, isn't it? Marble is very useful because it's so hard, and it lasts a long, long time. People make statues out of it. Why do you suppose it's used for statues?
50. Marble is used because it is hard and lasts for a long time. Put the piece of marble back on the yellow paper and look at the other rocks.

51. One of the rocks on the yellow paper started out as sandstone and was changed into something else. It's the dark gray rock. Find it and show it to my helper. Did you find it?
52. This piece of rock is called slate. It used to be sandstone but it became very hard after many years. Sandstone is very soft and it breaks easily. People use slate for making blackboards and roofs. Why couldn't you make blackboards and roofs out of sandstone?
53. Sandstone is too soft for that, isn't it? Put the slate back on the yellow paper and look at the last piece of rock. It's the shiny black rock.
54. This is a piece of coal. Coal is made of plants that grew near rivers and lakes millions of years ago. When these plants died, they fell into the water and rotted. After a long, long time, they turned into this kind of rock. Hold the coal up and look at it carefully.
55. Now if someone asked you what you know about coal, what would you say?
56. Did you say it's made from plants that grew near rivers and lakes long ago? Coal is a strange rock because it can be burned. When it is burned it gives off a lot of heat. Did you know it can be used to heat houses?
57. So now you know how rocks can be used by people. Let's see if you remember the uses of the rocks you have on the yellow paper. What's marble used for?
58. Did you remember that people can make statues out of marble? And what about the slate?
59. People use slate for blackboards and roofs, right? And do you remember how coal is used?
60. Coal can be burned and used for heating houses. So now our lesson has come to an end. Would you help put everything away? First, put the rocks on your green paper back into bag #1, and then put it back in the box.
61. Next, put the rocks on the blue paper back in bag #2, and put that away in the box.
62. Now then, the rocks on the yellow paper go into bag #3, and it belongs with the other bags in the box.
63. Oh, and the papers belong in the envelope.
64. When you're done, you can take off the microphone and the earphones. Thanks very much for your help--you have been great.

ITEM

PROMPTS

RESPONSE CORRECTNESS

COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

3-6

1. Put the earphones on first;  
then clip the microphone  
on your collar.

a. None  
b. Repeat  
c. Do you know what earphones  
(and/or microphones) are?  
Good, put them on.

| Verbal |      |      |       | Non-Verbal |      |      |       |
|--------|------|------|-------|------------|------|------|-------|
| Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |
|        |      |      |       |            |      |      |       |
|        |      |      |       |            |      |      |       |

FULL NVR:  
(1) Earphones on first  
(2) Microphone on col-  
lar next.  
Verbal: Asks for help

2. Did you put on the earphones  
first?

a. None  
b. Repeat  
c. Did you put on the earphones?  
Did you do that first?

| Full | Part | Amb. | Incr. | Full | Part | Amb. | Incr. |
|------|------|------|-------|------|------|------|-------|
|      |      |      |       |      |      |      |       |
|      |      |      |       |      |      |      |       |

FULL V/NVR:  
Indicates "Yes" or "No"  
but only if true.

3. Tell me where you put the  
microphone.

a. None  
b. Repeat  
c. Where did you put the  
microphone?

| Full | Part | Amb. | Incr. | Full | Part | Amb. | Incr. |
|------|------|------|-------|------|------|------|-------|
|      |      |      |       |      |      |      |       |
|      |      |      |       |      |      |      |       |

FULL VR:  
Says where microphone  
placed.

4. Can you hear her ok?

a. None  
b. Repeat  
c. Did you hear the teacher?

| Full | Part | Amb. | Incr. | Full | Part | Amb. | Incr. |
|------|------|------|-------|------|------|------|-------|
|      |      |      |       |      |      |      |       |
|      |      |      |       |      |      |      |       |

FULL V/NVR:  
Yes or no.

5. Say your name for me -- your  
whole name, please.

a. None  
b. Repeat  
c. Say your whole name.

| Full | Part | Amb. | Incr. | Full | Part | Amb. | Incr. |
|------|------|------|-------|------|------|------|-------|
|      |      |      |       |      |      |      |       |
|      |      |      |       |      |      |      |       |

FULL VR:  
Gives first & last  
name.

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| ITEM  | PROMPTS  | RESPONSE CORRECTNESS |      |      |       |            |      |      |       | COMMENTS                                     | TRANSCRIPTION OF LANGUAGE<br>(Do Not Write In This Space) |
|---|--|----------------------|------|------|-------|------------|------|------|-------|--|---|
|   |  | Verbal               |      |      |       | Non-Verbal |      |      |       | FULL V/NVR:<br>Yes or No                     |   |
|   |  | Full                 | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |  |   |
| 6. Were you able to hear yourself?  | a. None<br>b. Repeat<br>c. Did you hear your voice?                                      |                      |      |      |       |            |      |      |       |  |   |
| 7. Do you remember what she told you to do when you answer her questions? | a. None<br>b. Repeat<br>c. What should you do when she asks you something?               |                      |      |      |       |            |      |      |       | FULL VR:<br>"Answer" (speak into microphone) |   |
| 8. Can you tell me why you need to speak directly into the microphone?    | a. None<br>b. Repeat<br>c. Why should you speak right into the microphone?               |                      |      |      |       |            |      |      |       | FULL VR:<br>"You won't be able to hear me."  |   |
| 9. What is the lesson going to be about?                                  | a. None<br>b. Repeat<br>c. What will the lesson be about?                                |                      |      |      |       |            |      |      |       | FULL VR:<br>"Rocks"                          |   |
| 10. Tell me when you're ready to look at the materials.                   | a. None<br>b. Repeat<br>c. Are you ready to look at the materials? Tell me you're ready. |                      |      |      |       |            |      |      |       | FULL VR:<br>"I'm ready"                      |   |



ITEM

PROMPTS

RESPONSE CORRECTNESS

COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

|  |   | Verbal |      |      |       | Non-Verbal |      |      |       | FULL V/NVR:<br>"Yes"  |  |
|--|---|--------|------|------|-------|------------|------|------|-------|---|--|
|  |   | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |   |  |
| 11. Did you get a box and a big envelope?  | a. None<br>b. Repeat<br>c. Do you see a box? Do you see a big envelope?   |        |      |      |       |            |      |      |       |   |  |
| 12. Open the envelope, but not the box.  | a. None<br>b. Repeat<br>c. Open the envelope. Don't open the box.   |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Opens envelope<br>(2) Leaves box alone                   |  |
|  |   |        |      |      |       |            |      |      |       |   |  |
| 13. Can you tell me what's inside the envelope?  | a. None<br>b. Repeat<br>c. What is inside the envelope?   |        |      |      |       |            |      |      |       | FULL VR:<br>"3 sheets of paper"   |  |
|  |   |        |      |      |       |            |      |      |       |   |  |
| 14. Show me the yellow one first, then the blue one, and finally the green one.                  | a. None<br>b. Repeat<br>c. First hold up the yellow one. (pause) Now show me the blue one. (pause) Now show me the green one. |        |      |      |       |            |      |      |       | FULL NVR:<br>Shows sheets in order<br>(1) yellow<br>(2) blue<br>(3) green |  |
|  |   |        |      |      |       |            |      |      |       |   |  |
| 15. Arrange them side by side in front of you so that the yellow sheet is between the other two. | a. None<br>b. Repeat<br>c. Put the blue and the green sheets down on the table. Now put the yellow sheet between them.        |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Arranges sheets side by side<br>(2) Yellow in middle     |  |
|  |   |        |      |      |       |            |      |      |       |   |  |

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| ITEM   | PROMPTS  | RESPONSE CORRECTNESS |      |      |       |            |      |      |       | COMMENTS   | TRANSCRIPTION OF LANGUAGE<br>(Do Not Write In This Space) |
|--|--|----------------------|------|------|-------|------------|------|------|-------|--|---|
|  |  | Verbal               |      |      |       | Non-Verbal |      |      |       |  |   |
|  |  | Full                 | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |  |   |
| 16. Where is the blue sheet?   | a. None<br>b. Repeat<br>c. Where is the blue sheet...<br>on the left or on the right?  |                      |      |      |       |            |      |      |       | FULL VR:<br>Says where blue is<br>FULL NVR:<br>Indicates where blue is.                                  |   |
| 17. How about the green and yellow sheets?   | a. None<br>b. Repeat<br>c. Where is the green sheet?<br>Where is the yellow sheet?   |                      |      |      |       |            |      |      |       | FULL VR:<br>Says where--<br>(1) green &<br>(2) yellow are<br>NVR:<br>Indicates where green & yellow are. |   |
| 18. Open the box. Take bag #1 out. Leave the other bags inside.                        | a. None<br>b. Repeat<br>c. Do you see the box? Open it. Do you see bag #1? Take it out of the box. Do you see the other bags? Leave them inside. |                      |      |      |       |            |      |      |       | FULL NVR:<br>(1) Opens box<br>(2) Takes #1 out only  |   |
| 19. Take the rocks out of bag #1 and put them on the yellow paper in front of you.     | a. None<br>b. Repeat<br>c. Do you see the rocks in bag #1? Take them out. Put them on the yellow paper.  |                      |      |      |       |            |      |      |       | FULL NVR:<br>(1) Takes rocks out of bag<br>(2) Puts them on yellow paper.                                |   |
| 20. Put the rocks that look like pieces of glass in the big square on the green paper. | a. None<br>b. Repeat<br>c. Find the rocks that look like glass. They belong on the green paper. Can you put them on the big square?              |                      |      |      |       |            |      |      |       | FULL NVR:<br>(1) Finds crystals<br>(2) Puts them on large square<br>(3) On green paper                   |   |

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| ITEM   | PROMPTS   | RESPONSE CORRECTNESS |      |      |       |            |      |      |       | COMMENTS   | TRANSCRIPTION OF LANGUAGE<br>(Do Not Write In This Space) |
|--|---|----------------------|------|------|-------|------------|------|------|-------|--|---|
|  |   | Verbal               |      |      |       | Non-Verbal |      |      |       |  |   |
|  |   | Full                 | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. | FULL V/NVR:<br>(1) Feels rocks<br>(2) Describes  |   |
| 21. Feel one of the sides of the rocks with your finger and tell me how you would describe it. | a.None<br>b.Repeat<br>c.Feel one of these rocks.<br>(point) What does it feel like?   |                      |      |      |       |            |      |      |       |  |   |
| 22. Hold up one of the crystals<br>Can you see through it?                                     | a.None<br>b.Repeat<br>c.Hold up one of the crystals.<br>(point) Look through it.<br>Can you see anything?                                 |                      |      |      |       |            |      |      |       | FULL VR/NVR:<br>(1) Holds up crystal<br>(2) Looks through it<br>(3) Indicates YES/NO<br>as appropriate |   |
| 23. Now what can you tell me<br>about crystals?  | a.None<br>b.Repeat<br>c.What kind of sides do cry-<br>stals have? What kind of<br>edges do crystals have?                                 |                      |      |      |       |            |      |      |       | FULL VR:<br>Describes crystals or<br>says something about<br>them.                                     |   |
| 24. Do you remember what it<br>means to say that something<br>is clear?                        | a.None<br>b.Repeat<br>c.What does 'clear' mean?   |                      |      |      |       |            |      |      |       | FULL VR:<br>"You can see through<br>it"<br>FULL NVR:<br>Indicates that you can<br>see through it.      |   |
| 25. How are these crystals<br>different from the other<br>rocks you took out of<br>bag #1?     | a.None<br>b.Repeat<br>c.Look at the crystals. Now<br>look at the other rocks.<br>Are the crystals different<br>from the other rocks? How? |                      |      |      |       |            |      |      |       | FULL VR/NVR:<br>(1) Compares crystals<br>and other rocks<br>(2) Says how rocks<br>are different        |   |

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## ITEM

## PROMPTS

## RESPONSE CORRECTNESS

## COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

| ITEM  | PROMPTS   | Verbal |      |      |       | Non-Verbal |      |      |       | FULL NVR:  | COMMENTS |
|---|---|--------|------|------|-------|------------|------|------|-------|--|----------|
|   |   | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |  |          |
| 26. Put the crystals back in the big square on the green sheet.   | a. None<br>b. Repeat<br>c. Pick up the crystals. Put them in the big square on the green sheet. |        |      |      |       |            |      |      |       | (1) Puts all crystals<br>(2) in Big square<br>(3) on Green sheet   |          |
| 27. Now can you tell me what igneous rocks are?   | a. None<br>b. Repeat<br>c. What are igneous rocks?  |        |      |      |       |            |      |      |       | FULL VR:<br>(They are rocks that are) formed by heat.  |          |
| 28. Today there are still places where the earth's surface is molten. Can you guess what kind of places these might be? | a. None<br>b. Repeat<br>c. What places still have molten rocks?                                 |        |      |      |       |            |      |      |       | FULL VR:<br>ANYTHING appropriate including Yes/No  |          |
| 29. There is a piece of lava among your rocks. Can you guess which one it is?   | a. None<br>b. Repeat<br>c. Which rock is from a volcano?  |        |      |      |       |            |      |      |       | FULL NVR/VR:<br>(1) Looks for, chooses one of rocks from table.<br>(2) Says Yes/No, or asks if choice correct. |          |
| 30. Pick up the lava and describe it for me.  | a. None<br>b. Repeat<br>c. Pick up the lava. What color is it? What does it feel like?          |        |      |      |       |            |      |      |       | FULL NVR/VR:<br>(1) Selects largest rock, picks up<br>(2) Describes  |          |

ITEM

PROMPTS

RESPONSE CORRECTNESS

COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

3-12

| ITEM  | PROMPTS   | Verbal |      |      |       | Non-Verbal |      |      |       | FULL VR:<br>Provides some of given information about lava. | FULL NVR:<br>(1) Places lava on<br>(2) Small square on<br>(3) Green paper |
|---|---|--------|------|------|-------|------------|------|------|-------|--|---|
|   |   | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |  |   |
| 31. Can you tell me what you remember about where lava comes from?  | a. None<br>b. Repeat<br>c. Where does lava come from?   |        |      |      |       |            |      |      |       |  |   |
| 32. Put the lava on one of the small squares on the green paper.    | a. None<br>b. Repeat<br>c. Pick up the lava. Do you see a small square on your green paper? Put the lava there. |        |      |      |       |            |      |      |       |  |   |
| 33. Hold up the rock with the pointed tip and look at it carefully. | a. None<br>b. Repeat<br>c. Find the rock with the pointed end. Hold it up, and look at it.                      |        |      |      |       |            |      |      |       |  |   |
| 34. Look at the rock in your hand and describe what it looks like.  | a. None<br>b. Repeat<br>c. Look at the rock in your hand. Is it smooth or bumpy? What is the end like?          |        |      |      |       |            |      |      |       |  |   |
| 35. Can you tell me why it isn't a crystal?                         | a. None<br>b. Repeat<br>c. Tell me why this rock is not a crystal?  |        |      |      |       |            |      |      |       |  |   |

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## ITEM

## PROMPTS

## RESPONSE CORRECTNESS

## COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

36. Now put the arrowhead on the small square that is left on the green paper, and take bag #2 from the box.

a. None  
b. Repeat  
c. Look at the green sheet. Do you see a small square with nothing in it? Put the arrowhead in that square.

Verbal  
Full Part Amb. Incr.

Non-Verbal  
Full Part Amb. Incr.

FULL NVR:  
(1) Places arrowhead  
(2) Small square  
(3) Green paper  
(4) Takes bag #2 from box.

37. Did you find the one that has marks like stripes?

a. None  
b. Repeat  
c. Look for the rock with stripes. Did you find it?

FULL NVR/VR:  
(1) Looks at rocks on paper  
(2) Looks at sides  
(3) Indicates Yes/No as appropriate

38. Tell me what you know about how this kind of sandstone is formed.

a. None  
b. Repeat  
c. What is sandstone made out of?

FULL VR:  
Repeats some of given information

39. Put this piece of sandstone in the small square on your blue paper.

a. None  
b. Repeat  
c. Pick up the sandstone. Put it in the small square on the blue paper.

FULL NVR:  
(1) Places sandstone  
(2) Small square  
(3) Blue paper

40. Take a look at the smaller piece and tell me what it is like.

a. None  
b. Repeat  
c. Find the smaller piece of limestone. What is it like?

FULL NVR/VR:  
(1) Looks at other rocks  
(2) Picks up smaller rock  
(3) Describes

## ITEM

## PROMPTS

## RESPONSE CORRECTNESS

## COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

3-14

| (Do Not Write In This Space)   |  |        |      |      |       |            |      |      |       |   |  |  |
|--|--|--------|------|------|-------|------------|------|------|-------|---|--|--|
|  |  | Verbal |      |      |       | Non-Verbal |      |      |       | FULL NVR:   |  |  |
|  |  | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |   |  |  |
| 41. Put this piece of limestone on the other small square on your blue sheet, and pick up the other piece of limestone from the table and look at it.            | a. None  |        |      |      |       |            |      |      |       | (1) Picks up limestone<br>(2) Looks at it   |  |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |  |
|  | c. Put this piece of limestone in the other small square. Now pick up the other piece of limestone and look at it.   |        |      |      |       |            |      |      |       |   |  |  |
| 42. See if you can find any fossils in this piece of limestone. Can you tell me how they might have gotten in there?   | a. None  |        |      |      |       |            |      |      |       | FULL VR:<br>Repeats some of given information   |  |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |  |
|  | c. How did the fossils get in the limestone?   |        |      |      |       |            |      |      |       |   |  |  |
| 43. Put this piece of limestone in the big square on the blue paper.   | a. None  |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Places limestone<br>(2) Big square<br>(3) Blue paper                                 |  |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |  |
|  | c. Pick up the limestone. Put it in the big square on the blue paper.  |        |      |      |       |            |      |      |       |   |  |  |
| 44. Do you remember how the rocks on the green paper were formed?  | a. None  |        |      |      |       |            |      |      |       | FULL VR:<br>(They were formed)<br>"by heat."  |  |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |  |
|  | c. How were the rocks on the green paper made?   |        |      |      |       |            |      |      |       |   |  |  |
| 45. I want you to tell me where each rock is. Be sure to say where you put the crystals, the arrowhead, the lava, the sandstone and the two pieces of limestone. | a. None  |        |      |      |       |            |      |      |       | FULL VR: Says where each thing is:<br>(1) Crystal (2) arrowhead (3) lava (4) sandstone (5) limestones |  |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |  |
|  | c. Say where each rock is. Where is the crystal? Where is the arrowhead? Where is the lava? Where is the sandstone? Where are the two pieces of limestone? |        |      |      |       |            |      |      |       |   |  |  |

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## ITEM

## PROMPTS

## RESPONSE CORRECTNESS

## COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

|   |  | Verbal |      |      |       | Non-Verbal |      |      |       | FULL NVR:   |  |
|---|--|--------|------|------|-------|------------|------|------|-------|---|--|
|   |  | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | 1 cr. |   |  |
| 46. Can you put the rocks from the last bag of rocks on the yellow paper?                                   | a. None<br>b. Repeat<br>c. Get the last bag of rocks out of the box. Put them on the yellow paper.   |        |      |      |       |            |      |      |       | (1) Takes last bag out<br>(2) Removes rocks<br>(3) Places on yellow                 |  |
| 47. Did you find the light-colored rock?  | a. None<br>b. Repeat<br>c. Which rock is light colored?  |        |      |      |       |            |      |      |       | FULL NVR/VR:<br>(1) Finds light colored rock<br>(2) Yes/No as appropriate.          |  |
| 48. Does this piece of marble look like the limestone that you have on the blue paper? How is it different? | a. None<br>b. Repeat<br>c. Look at the marble. Now look at the limestone on the blue paper. Is the marble different from the limestone? How? |        |      |      |       |            |      |      |       | FULL VR/NVR:<br>(1) Compares marble & limestone<br>(2) Says how they look different |  |
| 49. Why do you suppose marble is used for statues?  | a. None<br>b. Repeat<br>c. Why is marble used for statues?   |        |      |      |       |            |      |      |       | FULL VR:<br>Provides some of given information                                      |  |
| 50. Put the piece of marble back on the yellow paper and look at the other rocks.                           | a. None<br>b. Repeat<br>c. Put the piece of marble on the yellow paper. Now look at the other rocks on the yellow paper.                     |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Puts marble on yellow paper<br>(2) looks at other rocks            |  |

ITEM

PROMPTS

RESPONSE CORRECTNESS

COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

3-16

|  |  | Verbal |      |      |       | Non-Verbal |      |      |       | FULL NVR/VR:   |  |
|--|--|--------|------|------|-------|------------|------|------|-------|--|--|
|  |  | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |  |  |
| 51. Did you find the dark gray colored rock?                                     | a. None<br>b. Repeat<br>c. There is a dark colored rock there. Did you find it?    |        |      |      |       |            |      |      |       | (1) Finds dark gray rock<br>(2) Shows it to RA<br>(3) Responds Yes/No as appropriate |  |
| 52. Why couldn't you make blackboards and roofs out of sandstone?                | a. None<br>b. Repeat<br>c. Why aren't blackboards and roofs made out of sandstone? |        |      |      |       |            |      |      |       | FULL VR:<br>Provides some of given information.                                      |  |
| 53. Look at the last piece of rock. It's the shiny black rock.                   | a. None<br>b. Repeat<br>c. Find the shiny black rock.                              |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Put slate back<br>(2) Yellow paper<br>(3) Pick up coal              |  |
| 54. Hold the coal up and look at it carefully.                                   | a. None<br>b. Repeat<br>c. Hold up the coal. Look at it.                           |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Holds up coal<br>(2) Examines coal                                  |  |
| 55. Now if someone asked you what you know about coal, what would you tell them? | a. None<br>b. Repeat<br>c. What do you know about coal?                            |        |      |      |       |            |      |      |       | FULL VR:<br>Provides some of given information                                       |  |

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ITEM

PROMPTS

RESPONSE CORRECTNESS

COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

| ITEM  | PROMPTS   | Verbal |      |      |       | Non-Verbal |      |      |       | FULL V/NVR:<br>Acknowledges Yes/No<br>as appropriate                       |  |
|---|---|--------|------|------|-------|------------|------|------|-------|--|--|
|   |   | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |  |  |
| 56. Did you know coal can be used to heat houses?                               | a. None<br>b. Repeat<br>c. Can coal be used to heat houses?   |        |      |      |       |            |      |      |       |  |  |
| 57. What's marble used for?   | a. None<br>b. Repeat<br>c. What can people make out of marble?  |        |      |      |       |            |      |      |       | FULL VR:<br>Provides some of given information                             |  |
| 58. What about slate?   | a. None<br>b. Repeat<br>c. What can people make out of slate?   |        |      |      |       |            |      |      |       | FULL VR:<br>Provides some of given information                             |  |
| 59. Do you remember how coal is used?   | a. None<br>b. Repeat<br>c. What do people use coal for?   |        |      |      |       |            |      |      |       | FULL VR:<br>Provides some of given information                             |  |
| 60. Put the rocks on your green paper into bag #1 and put it back into the box. | a. None<br>b. Repeat<br>c. Pick up the rocks on your green paper. Put them into bag #1. Now put the bag into the box. |        |      |      |       |            |      |      |       | FULL NVR:<br>(1) Puts rocks on blue paper in bag #1<br>(2) Puts Bag in box |  |

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PROMPTS

RESPONSE CORRECTNESS

COMMENTS

TRANSCRIPTION OF LANGUAGE  
(Do Not Write In This Space)

|  |  | Verbal |      |      |       | Non-Verbal |      |      |       |   |  |
|--|--|--------|------|------|-------|------------|------|------|-------|---|--|
|  |  | Full   | Part | Amb. | Incr. | Full       | Part | Amb. | Incr. |   |  |
| 61. Next put the rocks on the blue paper back in bag #2 and put that away in the box.            | a. None  | /      |      |      |       |            |      |      |       | FULL NVR:<br>(1) Puts rocks from blue paper in bag #2.<br>(2) Puts bag in box |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |
|  | c. Pick up the rocks on the blue paper. Put them into bag #2. Now put that bag into the box.           |        |      |      |       |            |      |      |       |   |  |
| 62. The rocks on the yellow paper go into bag #3, and it belongs with the other bags in the box. | a. None  | /      |      |      |       |            |      |      |       | FULL NVR:<br>(1) Puts rocks from yellow in bag #3;<br>(2) Puts bag in box     |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |
|  | c. Now pick up the rocks on the yellow paper. Put them into bag #3. And now put that bag into the box. |        |      |      |       |            |      |      |       |   |  |
| 63. The papers belong in the envelope.   | a. None  | /      |      |      |       |            |      |      |       | FULL NVR:<br>Papers back in envelope  |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |
|  | c. Put the sheets of paper into the envelope.  |        |      |      |       |            |      |      |       |   |  |
| 64. Take off the microphone and the earphones.   | a. None  | /      |      |      |       |            |      |      |       | FULL NVR:<br>(1) Removes microphone<br>(2) Removes earphone                   |  |
|  | b. Repeat  |        |      |      |       |            |      |      |       |   |  |
|  | c. Take off the microphone. And now take off the earphones.  |        |      |      |       |            |      |      |       |   |  |
|  |  |        |      |      |       |            |      |      |       |   |  |
|  |  |        |      |      |       |            |      |      |       |   |  |

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## Appendix C

### Lesson Transcripts

#### Excerpt #1:

Teacher with math group made up of about a half of her third grade Spanish-English bilingual class. This group, the "Tigers" consists of the students who know the least English in the class. The students are seated at tables in the front of the room; the teacher stands before them. She straightens herself up, looks out over the class without saying anything for a moment, then speaks up in her "public" voice:

1. T: OK, Tigers. Open your mathbooks to page 226. Now we're going to review this page just for a little while since it's been two days since we have used this book. You did have math on Friday, but we didn't use our books. Now we are talking about fractional parts of something. Now look at our problems.
2. T: OK, now boys and girls, when we talk about one-half of a number, like one-half of 6, that's the same as dividing 6 by--, Luis?
3. C1: 2.
4. T: Same as dividing 6 by 2! {She writes the problem on the board: 6 over 2. Pointing at the 2, she says:} You use your denominator--that's the bottom number, and you divide this number {points at 6} by the bottom number of the fraction. What is 6 divided by 2?
5. Cs: 3!
6. T: Equals 3! {Writes the equation on the board: " $1/2 \times 6 =$ " } So one-half of 6 is--
7. Cs: 3!
8. T: 3. OK? Let's do another one. What if I told you I want you to find one-third of --12? {She writes " $1/3 \times 12 =$ " on the board as she speaks.} It's the same thing as dividing 12 by what number, Orlando?
9. C2: 3.

10. T: It's the same as dividing 12 by 3. {She writes this as a fraction on the board: 12 over 3.} 12 divided by 3 is--
11. Cs: 4!
12. T: 4! So one-third of 12 is--4!
13. Cs: 4! 4!
14. T: Let's do another. This time, we're going to do one that's a little harder. One-sixth of 36 equals {writes equation on board as she speaks: " $1/6 \times 36 =$ "}, is the same as, 36 divided by what number? Carlos? Same as 36 divided by--
15. C3: 6.
16. T: 6. What is 36 divided by 6, Yvonne?
17. C4: 6.
18. T: Equals 6! {Pointing at the equation on the board she asks:} So what is one-sixth of 36?
19. Cs: 6!
20. T: 6. Everybody remember that? Remember when we did the work on Thursday? OK? It's really easy because your top number is one. So all you have to do is go ahead and divide your second number, the one they want to know the fractional part of, by the denominator of your fraction {she points at the relevant parts of the statements on the board as she says this}. It gets a little more complicated when we are doing it where it had another number on the top half of the fraction, like two-thirds, or two-sixths, but these are easy because you only have to do ahead and do like a division problem, OK?
21. T: Do we need to do any more problems to refresh your memory? Oh, Roy! You weren't here. Let's do one more for Roy because he wasn't here last week. These are easy, Roy. We're talking about fractional parts of certain numbers, let's say one-fourth of 24 equals some number. All we do is say 24 divided by the bottom number of the fraction--equals-- {She writes the two statements of the problem on the board, with each part written as she

refers to it.)

22. T: {To Roy:} OK, what is 24 divided by 4?
23. C5: {No response}
24. T: What number times 4 would give you 24?
25. C5: 6?
26. T: 6. Good. So one-fourth of 24 equals 6. OK, these problems are just like division problems. You divide the second number, the whole number by the bottom number of the fraction.
27. C7: Do we put down the, this division number--where, the one-third of 6 equals 2?
28. T: OK, no--you don't have to write out the division problem, but I think it's a good idea to do so so you can see exactly how you got the answer. Sometimes we try to do everything in our heads, but then you don't see your mistakes. You can't catch your mistakes. It's all up here [taps forehead], OK? You don't have to write out your division problems, but I think it is a good idea! So that you can check your problems before you go on to next one. So you can make sure you didn't make any mistakes in your division up in your head, OK?

## Excerpt #2

Teacher with third grade Spanish-English bilingual class. She is going over a list of English spelling words written on the chalkboard. The object of the lesson is to teach the children the meaning of these items so they can use them in sentences which they are construct and write out on their own.

1. T: Let me go over these first. Pongan atencion Uds. [=Pay attention.]
2. T: {To a student who seems to be confused:} Maria puede trabajar contigo. [=Maria {the TA} can work with you.]
3. T: {Pointing at the first word listed on the board:} Number one is "weak". Not the day of

the "week". It's when a person is weak. And that means you don't have too much strength. Like, when you get sick, and when you catch the flu. After you get over the flu, you still feel kinda weak. Right? You're not very strong. Weak.

4. T: Esto quiere decir "debil". Cuando uno esta debil, no esta fuerte. Por ejemplo, cuando tengamos la gripe, verdad? No tenemos fuerzas. Estamos debil. Es lo que quiere decir esta palabra. [=This means weak. When someone is weak, he's not strong, right? We don't have much strength; we're weak. That's what this word means.]
5. T: Number two is "spoke". The past tense. I spoke to my friend yesterday. OK. In the past tense.
6. T: Uh, esto quiere decir "hablar", en el pasado. Yo--ayer hable con mi amigo. [=This means to speak, in the past. I--yesterday, I spoke with my friend.]
7. T: Number three is "silk". Know what that is? It's material. It's fabric. It's very shiny, and it's very soft. I'm sure you've seen this kind of material.
8. C: {unintelligible} a pillow.
9. T: Yeah, pillows can. The outsides can be made of silk. It's shiny and silvery.
10. T: Esta palabra es "seda". Saben lo que es tela. [=This word is silk. You all know what cloth is.]
11. C: {unintelligible}
12. T: Es tela, pero es bien suavecito y es brillante. Y con la mano se resbala--el material. [It's cloth, but it's very soft and shiny. You can slide your hand on it--the material.]
13. T: Number four is "pack". Like I'm going to pack a lunch. Or it could be a bag. It could be a backpack, when people go hiking. That's what it is pack.
14. T: Esto es como una bolsa, como empacan una

bolsa grande de comida o de lo que sea.  
[=This is like a bag, like when they pack a large bag of food or whatever.]

15. T: Number five is "neck". El cuello. And number six is "lake". You know what that is. Lago. Number seven is "brick". Ladrillo.
16. T: Number eight is "beak", the mouth of a bird. The beak. El otro es la boca de la, del pajarito. El pico, el piquito. Verdad? El pico. Piquito. [=The next one is the mouth of a bird. The beak, the little beak, right? The beak. Little beak.]

### Excerpt #3

Same teacher as in excerpt #1 with a reading group in her third grade class. The students are Spanish-English bilingual students, most of them classified as LEP. The teacher has been going over some vocabulary items with these students in preparation for silent reading of a story in their English readers.

1. T: {Points at word "neighborhood" on her chart:} Your neighborhood. Who can tell me what that word means? Patricia?
2. C: Like the place where you live?
3. T: Um-hum. It's the area where your house is. Your neighborhood, boys and girls, is that area, right closeby, where your house is.
4. C: Uh, where it is all the block?
5. T: Uhm-hum. It usually means like within a block or so.
6. C: Goes to a block?
7. T: Uh-huh. Within a block or so. And the people who live in your neighborhood are called your, what?
8. Cs: Your neighbors!
9. T: Yes, the people who live in your neighborhood are your neighbors. The neighborhood is the area close by your house. OK, let's go over the words again.

{Teacher and students read the list of words again until they get to the word "neighborhood":}

10. T: Neighborhood. Is this a compound word?
11. Cs: Yes. Yeah.
12. T: Made up of what?
13. C: Neighbor!
14. T: And--
15. Cs: Hood!
16. T: Yes!

#### Excerpt #4

Teacher with a reading group in a third grade bilingual class. The students are Cantonese English bilingual students, most of them classified as LEP. They have been going through some new vocabulary items in preparation for completing an assignment in their spelling workbooks.

1. T: Now let's see how you're going to do this.  
{Page in workbook}
2. T: {Paraphrasing the text:} Now suffixes that tell about what people do can be -er or -or. What is a suffix?
3. C1: Beautiful?
4. T: This is something we forget all the time. What is a suffix?
5. C2: Part of a word.
6. T: It's a part of a word, but what part of a word?
7. C2: Some part like a "E-R"?
8. T: Yes! Where does a suffix go?
9. C2: Like a, behind a word?
10. T: At the end of a word, right! To change the meaning of a word just a little bit. Now



- look at the first part. {Peads:} "This woman governs the state." So she's a--
11. Cs: Governor!
12. T: Governor! "O-R" is a suffix. It tells what kind of work a person does. Look at the next one. {Reads:} "This man teaches. He is a--
13. Cs: Teacher!
14. T: Teacher! "E-R" is also a suffix that tells what a person does. All right. Now this says "write the word that belongs on the like", Let's read the words so we know what they are. What are the first two words, John?
15. C4: Sailor, actor.
16. T: Sailor and actor. What does a sailor do?
17. Cs: Sail--on a boat.
18. T: Uh, uh, uh! Hands, hands, hands! What does a sailor do? Lee?
19. C5: Work on a boat.
20. T: Works on a boat. He sails on a boat. He's a sailor. And what does an actor do?
21. C5: An actor is the one who acts.
22. T: In what?
23. C5: In the movie.
24. T: In the movies, or on TV, or in plays. Yes.
25. T: And what are the next two words, Norman? Can you tell me?
26. C6: Inventor.
27. T: Inventor, yes, and--
28. C6: Mayor.
29. T: What does an inventor do? Morris, do you know?
30. C7: I dunno.

31. T: Song, do you know?
32. C8: They invented up things?
33. T: They make things. New things. An inventor made up the first TV. An inventor made the telephone, the first telephone. An inventor made the first electric light. An inventor invents things. He makes up new things for the first time.
34. T: What does a mayor do?
35. C8: A mayor is the person who own the city?
36. T: He doesn't own the city. The mayor doesn't own the city. He's kind of like the leader of the city. Do we have a mayor?
37. Cs: Yeah.
38. T: Raise your hand. Who is our mayor? {No response}.
39. T: Ooh! You forgot yesterday! Who is our mayor?
40. Cs: Mayor Feinstein!
41. T: Yes! Mayor Feinstein. Is our mayor a man or a woman?
42. Cs: Woman!
43. T: Yes, so a woman can be a mayor. A woman can be a govenor. A woman can be a president! All right. The next two.
44. C: Tailor and a collector.
43. T: OK, do you know what a tailor does? May?
44. C9: A tailor is, is someone who make clothes..
45. T: Yes, a tailor is someone who makes clothes, especially suits and coats. And what about a collector? What does a collector do? Norman?
46. C6: He collects things.
47. T: He collects or gathers and saves things. Collectors sometimes gather and save

bottletops, sometimes they gather and save baseball cards. What else can collectors gather together?

48. C6: Stamps.
49. T: Stamps.
50. C6: Money?
51. T: Coins! Lots of people collect coins. All different kinds of money and coins from all over the world. People who collect coins are called coin collectors. All right, the next two? Tong?
52. C: Ranger, butcher.

#### Excerpt #5

Teacher with a reading group of 10 LEP students in a third grade Cantonese-English bilingual class. The teacher leads the students in a discussion of the story which the children had just read silently.

1. T: Look on page 42. Where do you suppose they are there?
2. C1: In the, uh, in the park.
3. T: In the park. How many of you have been to Golden Gate Park?
4. Cs: {A few hands up}
5. T: Where is it?
6. Cs: San Francisco.
7. T: It's in San Francisco. Look at that picture there on pages 42 and 43. Do you see--have you ever been to a place where there is a bridge?
8. Cs: Yeah, yes!
9. C2: And you know--and down--uhm, uh, the--uh, uh, 14th Street? {Child gestures as he speaks, arching one of his arm high, the other arm passing under it}

10. T: Uh, down on East 14th Street? There's a bridge down there?
11. C2: No, uhm, uhm, uh--{He repeats the gesture}
12. T: Down by the water?
13. C2: Uhm-hum.
14. T: They call that the es--tu--ary, the estuary. That's where the water comes in--from the bay.
15. C3: They have a baby center there.
16. T: They have a baby center?
17. C4: Yeah, a baby sitter.
18. T: A baby sitter. They have baby sitters!
19. T: Have you ever seen a bridge like this?  
{Redirects group's attention to the picture in the book:} A wooden bridge! Do you know where there is one like that around here?
20. Cs: I know! I know!
21. C5: At the zoo.
22. T: Yes, at the baby zoo. That's right.
23. C5: And they got one at Laney College.
24. C6: Yeah, it's bigger.
25. T: You know where else there is one? At Golden Gate Park. There's a place called the Japanese Tea Garden.
26. Cs: Yeah, yeah.
27. C6: I been there.
28. T: Did you ever see that wooden bridge?
29. C6: Yeah.
30. T: It's a big one. Goes way up high.
31. C7: I went to San Francisco to Chinatown. And um, on freeway sometime they have a big bridge on them.

32. T: Yes, but the only thing is that on the freeway, those bridges are not made of wood. Those are made of steel and concrete. This one here is made of wood.
33. T: OK, what animal is that on page 43? {A swan}
34. C6: Goose.
35. T: How many say a goose?
36. Cs: {Hands}
37. T: Do you know another animal that looks like a goose?
38. C2: A duck!
39. T: A duck. But this one here has a looo-ong neck! It begins with--sw-- {it rms initial sounds of the word} --sw--!
40. C4: I know! I know! Uh, uh, a swan!
41. T: A swaaaaan! Yes, a swan. Did you ever hear that poem? Swan swam over the sea. Swim, swan, swim! Swan swam back again. Well swum, swan! Did you ever hear that? That's a good poem. An un-twistable tongue-twister poem.

## APPENDIX D

### Ratings of Classroom Features Relevant to Language Learning

Classroom: \_\_\_\_\_ Code: \_\_\_\_\_ Rater: \_\_\_\_\_

#### CLASSROOM VARIABLES

RATING<sup>1</sup>  
(1-7, NA)      COMMENT

#### General Classroom Factors

- |  |       |  |
|--|-------|--|
| 1. Further development of L1 proficiencies is promoted for target subjects above and beyond that used in instruction.              | _____ |  |
| 2. Children are on task most of the time.  | _____ |  |
| 3. The noise level in classroom is low.  | _____ |  |
| 4. The level of physical activity and movement in classroom is low.  | _____ |  |
| 5. The class activities are preplanned, not just the topics, but the events within the activities.                                 | _____ |  |
| 6. The class is frequently allowed to make choices about learning activities.  | _____ |  |
| 7. Most of the time spent in learning activities is related to language and/or school content (as opposed to games, crafts, etc.). | _____ |  |

#### Models of Teaching and their Execution

- |   |       |  |
|---|-------|--|
| 8. Teacher frequently presents puzzling event or situation for students to explore or react to as initial part of lesson. | _____ |  |
| 9. Teacher frequently presents or elicits data or instances from class/group and then goes on to have them categorized.   | _____ |  |

<sup>1</sup> Rate how descriptive each of the following sentences is of the classroom, using "7" to indicate "very descriptive" and "1" to indicate "not descriptive." Use NA or indicate "does not apply." Leave rating space blank or insert a dash if you cannot rate a dimension. However, be sure to include a comment to that effect, so that it is clear that the item was not just skipped.

10. Teacher frequently presents instances of a concept and then has children work out the concept and its defining attributes. \_\_\_\_\_
11. Teacher frequently presents rule or concept with its defining attributes and some sample instances and noninstances and then goes on to have children practice this classification. \_\_\_\_\_
12. Teacher frequently presents material to be memorized (associations, correspondences, even poems, etc.). \_\_\_\_\_
13. Teacher frequently presents questions, passages to read, or other stimuli, and has children respond (or teacher models response) and then has children respond to more instances for which they receive selective reinforcement. \_\_\_\_\_
14. Teacher frequently has children working in group projects (not just seated in group). \_\_\_\_\_
15. Teacher frequently has children working individually. \_\_\_\_\_
16. Teacher frequently has children participating in whole class activities, not just seated that way. \_\_\_\_\_
17. Teacher frequently takes the role as the center of the learning activity, being the source of information, the organizer and the pacer of the situation (high structure). \_\_\_\_\_
18. Teacher frequently takes the role as a reflector and clarifier of student ideas and a facilitator of the activity (low structure). \_\_\_\_\_
19. Teacher uses a variety of teaching models both within and across subject matter areas. \_\_\_\_\_
20. Teacher is flexible in the use of teaching models or scripts, varying the exact conditions and characteristics from day to day and topic to topic. \_\_\_\_\_
21. Teacher is effective in using the teaching models that he/she frequently employs. \_\_\_\_\_

### Language Input

22. Teacher frequently uses L1 to interact with children concerning schoolwork. \_\_\_\_\_
23. Teacher frequently translates individual words to clarify their meaning. \_\_\_\_\_
24. Teacher frequently uses translations to clarify instructions in lessons or assignments. \_\_\_\_\_
25. Teacher produces a great deal of content-relevant English, audible to most of the class (not just giving instructions, but providing information, giving explanations, etc.) \_\_\_\_\_
26. Students are frequently exposed to literary forms of English through oral reading of stories, poems, etc. \_\_\_\_\_
27. Teacher frequently attempts to promote vocabulary development. \_\_\_\_\_
28. Teacher frequently plans and carries out instruction concerning the structural aspects of English. \_\_\_\_\_
29. Teacher often draws attention to language per se in activities where language is performing primarily a communicative function. \_\_\_\_\_
30. Teacher frequently corrects mistakes in spoken English. \_\_\_\_\_
31. Teacher frequently focuses on teaching high level skills (comprehension, integration of operations, etc.). \_\_\_\_\_
32. Teacher frequently focuses on teaching mechanics or lower level skills or operations. \_\_\_\_\_
33. Teacher frequently promotes the acquisition of metalinguistic concepts, e.g., verb, sentence, etc. \_\_\_\_\_
34. Students interact often with peers about schoolwork. \_\_\_\_\_
35. Teacher frequently repeats and modifies previous utterance (upgrading, downgrading, paraphrasing) to improve understandability. \_\_\_\_\_
36. Teacher frequently provides nonverbal demonstrations or motions to help clarify language. \_\_\_\_\_



37. Teacher frequently adjusts and tailors use of English to the ability level of students (groups or individuals). \_\_\_\_\_
38. Teacher frequently provides individual clarification, help, and tutoring. \_\_\_\_\_
39. Teacher frequently checks with children to see if she/he is being understood (i.e., uses overt checks like "Do you understand?", etc.). \_\_\_\_\_
40. Most of the students are asked to perform learning tasks that seem appropriate for their levels of learning proficiency. (Raters should consider both oral and written assignments. Note if there is discrepancy.) \_\_\_\_\_
41. Teacher's language could be considered a "good language model" -- rich, elaborated language, appropriate vocabulary, structurally well formed, clear articulation, accurate spelling, etc. (Raters should comment on particular strengths and weaknesses.) \_\_\_\_\_
42. Aide(s) frequently uses L1 to interact with target children concerning schoolwork. \_\_\_\_\_
43. Aide(s) frequently translate single words to help clarify their meaning for targets. \_\_\_\_\_
44. Aide(s) frequently uses translations to clarify instructions in lessons or assignments for target children. \_\_\_\_\_
45. Aide(s) frequently plans and carries out instruction concerning the structural aspects of English with targets. \_\_\_\_\_
46. Aide(s) frequently corrects mistakes in spoken English of target subjects. \_\_\_\_\_
47. Aide(s) frequently focusses on teaching high level skills (comprehension, integration of operations, etc.) with target subjects. \_\_\_\_\_
48. Aide(s) frequently focuses on teaching mechanic or lower level skills or operations with target subjects. \_\_\_\_\_
49. Aide(s) frequently provides individual clarification, help, tutoring, to targets. \_\_\_\_\_

50. Aide's language could be considered a "good language model." (Comment on strengths and weaknesses of each aide.) \_\_\_\_\_

(Amount of time/wk. in each subject matter area and amount of time/wk of direct instructional time in each subject matter area for target children should be considered as input variables, but will not be rated on this form.)

#### Feedback

51. Children are frequently given immediate feedback in oral production situations. \_\_\_\_\_
52. Children are frequently given informative, diagnostic, and/or explanatory feedback in oral productive situations. \_\_\_\_\_
53. Children are frequently given prompt feedback on written assignments or homework. \_\_\_\_\_
54. Children are frequently given informative, diagnostic, and/or explanatory feedback on written assignments or homework. \_\_\_\_\_
55. Teacher frequently monitors children's work in progress. \_\_\_\_\_
56. Teacher frequently allows or requests target children to provide additional responses when the initial one was incorrect. \_\_\_\_\_
57. Teacher attempts to diagnose reasons for student difficulty with learning tasks. \_\_\_\_\_

#### Production Factors

58. Teacher frequently asks questions that require extended oral response (more than just a single word or response). \_\_\_\_\_
59. Teacher frequently requires target students to compose extended written text (not copy). \_\_\_\_\_
60. Teacher provides opportunities for all children in class to respond orally (either by calling on all children or opening the floor to volunteers). \_\_\_\_\_
61. Teacher frequently requires oral responses in lessons (as opposed to lecture with no oral participation required). \_\_\_\_\_

62. Teacher frequently requires written responses in lessons. \_\_\_\_\_
63. Teacher does not allow herself to be interrupted or distracted very frequently. \_\_\_\_\_

Ratings of Target Subjects

For each target subject who was observed sufficiently on the tape, rate:  
 (1) the frequency with which his/her responses were exclusively in English,  
 (2) the extent to which the child was "on task," and  
 (3) the frequency with which the child contributed verbally to classroom activities.

| <u>Name of Target Child</u> | <u>ID Number</u> | <u>(1) Freq. Engl.</u> | <u>(2) On Task</u> | <u>(3) Contrib.</u> |
|-----------------------------|------------------|------------------------|--------------------|---------------------|
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |
| _____                       | _____            | _____                  | _____              | _____               |

Other comments about this classroom, including a global evaluation of how good you feel this classroom was for language and content learning and any comments you have about the teaching or handling of NES subjects:

